OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 7

ENVIRONMENTAL DOCUMENTATION

CLA-SR 794-00.60

PID 78677

Tricia Bishop
03-11-2010

Moving Ohio into a Prosperous New World

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Level 3

PROJECT INFORMATION

County, Route, Section: CLA-SR 794-00.60	**PID:** 78677	**SJN:** 479349
Project Sponsor: Clark County Engineer		**ODOT District:** 7
Local Name of the Facility: West Blee Road		
Program: Surface Transportation Program	**Project Length:** 1.4-Mile	
Termini: The original Sub-Area Study was generally bound by US68 (west), Jackson Road (south), SR 72 (east), and Possum Road (north), to allow for the appropriate development and evaluation of alternatives.		
Funding Source(s): ✓ Federal ☐ State ✓ Local ☐ Private		
Estimate: Engineering $ 402,838	Right-of-Way $ 816,029	Construction $ Local Funds
Sale/Award Date: 06-04-2012	**STIP/TIP Date:** May 2007	

PROJECT DESCRIPTION

Is an Interchange Modification Study / Interchange Justification (IMS/IJS) required? ☐ **Yes*** ☒ **No**

If yes, when did FHWA grant a conditional approval for this project? Date: N/A

**If yes, for CE 2 or CE 3 projects, a copy of the approved document must be submitted to FHWA with a request for final approval of the IMS/IJS.*

The existing SR 794 alignment runs primarily east and west between US 68 and SR 72 adjacent to the Springfield Municipal Airport and the Springfield Ohio Air National Guard (OANG) base. Constructed in 1957, SR 794 is a two-lane road with a posted speed limit of 55 miles per hour (mph). SR 794 intersects one county road (Sparrow Road), one township road (Peacock Road), and several Airport access roads. The study area's land use is predominately residential and agricultural, with the Airport, OANG base, and some commercial use along US 68.

Currently, approximately 2,400 vehicles travel SR 794 a day. About 1,200 of these vehicles use SR 794 as the primary connection between US 68 and SR 72. In addition, about five percent of the 2,400 vehicles traveling SR 794 a day are heavy trucks. The highway resides in the Springfield Urbanized Area and is part of the TCC Metropolitan Planning Organization (MPO) planning jurisdiction. The Ohio Department of Transportation (ODOT) currently owns and maintains SR 794; however, ODOT has initiated the process of abandoning the roadway to the Clark County Engineer for ownership, maintenance and access control.

Clark County and ODOT propose to relocate SR 794 north of its current alignment from its intersection with Sparrow Road to west of its intersection with Peacock Road. The relocation will allow the base to meet current clearance requirements to comply with the United Facilities Criteria for anti-terrorism and force protection at Department of Defense Facilities. The realignment will also allow for anticipated future base growth. The proposed new roadway will be a two-lane section constructed to ODOT Design Standards. The total length of new roadway will be approximately 1.2-mile.

Peacock Road will intersect the new alignment approximately 0.4-mile north of the current intersection. The segment of Peacock Road between the existing intersection and the new intersection will be vacated and the pavement removed except as needed to maintain property access.

The proposed alternative was developed from the *CLA-West Blee Road (SR 794) Sub-Area Study* (issued June 2006). The study involved various project stakeholders including the affected residents, business owners, officers of the OANG base, community leaders, and the political entities and funding agencies who will be responsible for implementing the solutions. In addition, the study included a study team comprised of representative stakeholders and project sponsors. This study team met frequently through completion of the study and selection of a preferred conceptual alternative.

Locations maps and photographs are provided in Attachment A. Preliminary plans are provided in Attachment B. The Red Flag Summary in the *Sub-Area Study* (provided in Attachment C) provides additional details regarding area existing conditions,

PURPOSE AND NEED FOR THE PROJECT

The Department of Defense United Facilities Criteria establish, among other things, minimum standoff distances for Department of Defense facilities from area roadways, for purposes of anti-terrorism and force protection. Currently, several locations at the base do not meet the minimum standoff distance required from West Blee Road (SR 794). Failure to meet United Facilities Criteria may be considered by the Base Realignment Commission in evaluating bases for closure.

The approved Purpose & Need Statement, as presented in the *CLA-West Blee Road (SR 794) Sub-Area Study* (issued June 2006), is provided in Attachment D. In summary, the purpose and need of the project is to meet the force protection (standoff) requirements of the United Facilities Criteria at the Ohio Air National Guard (OANG) base while providing for a connection between US 68 and SR 72 that considers future development and does not adversely impact mobility and emergency response time.

ALTERNATIVES

The Do Nothing Alternative is not feasible, prudent or practicable (Mark all that apply):

It would not correct existing capacity deficiencies;	
It would not correct existing safety hazards;	X
It would not correct the existing roadway geometric deficiencies;	
It would not correct the existing deteriorated conditions and maintenance problems, or	
It would result in serious impacts to the motoring public and general welfare of the economy.	X

A detailed presentation of the alternatives as presented in the *CLA-West Blee Road (SR 794) Sub-Area Study* (issued June 2006), is provided in Attachment E. The table below presents the alternatives considered. As a result of public input and local agency input, Alternatives D1 and D4 were selected as the final preferred alternatives. In April 2006, the TCC Board voted to select Alternative D1 as the preferred alternative for design after further public involvement and evaluation of these two alternatives.

Alternative		Description
Closure/ Upgrade	A	Relocate OANG Buildings to meet DOD standards.
	B	Close SR 794 between Sparrow and Peacock, Upgrade Sparrow and Peacock Roads to accommodate additional traffic and truck loads.
	C	Close Peacock between SR 794 and Sparrow, Close SR 794 at Sparrow Road, Upgrade Sparrow Road, Cul-de-sac Peacock Road approximately 1,600 feet north of SR 794.
SR 794 Vicinity	D1	*Selected Alternative*: Realign SR 794 from Mill Creek to near Airport entrance.
	D2	Realign SR 794 from Mill Creek with long curves.
	D3	Realign SR 794 from Mill Creek to US 68 near Cottingham Road (north).
	D4	Realign SR 794 straight from Mill Creek to US 68.
	E	Close 794 and extend & upgrade Sparrow Road from US 68 to SR 72.
Jackson Road Vicinity	F1	Straighten curves and upgrade Jackson Road and realign the west end to go north of the homes on the north side of Jackson Road. The new road would intersect US 68 1300 feet north of the existing US 68 & Jackson Road Intersection.
	F2	Straighten curves and upgrade Jackson Road and realign the west end to go north of the homes on the north side of Jackson Road. The new road would intersect US 68 700 feet north of the existing US 68 & Jackson Road Intersection.
	F3	Jackson Road new alignment from US 68 to SR 72 south of existing Jackson Road.
W. Possum Vicinity	G1	New Alignment for W. Possum Road connecting with Fairfield Pike.
	G2	New Alignment for W. Possum Road connecting with Springfield-Xenia Road.
	G3	New Alignment for W. Possum Road - connecting E. Possum Road at SR 72 with US 68 at US 68/Springfield-Xenia Road intersection.
	G4	New Alignment for W. Possum Road connecting E. Possum Road at SR 72 with US 68 south of Midwest Storage.

ALTERNATIVES

Combi-nations	H	Close SR 794; Any Jackson Road improvements & New W. Possum Road alignments.
	I	Any Jackson Road improvements & any SR 794 realignments.
	J	Any SR 794 realignments and any W. Possum Road Improvements.
	K	Any Jackson Road improvements and Extend Sparrow Road.

ROADWAY CHARACTER

Functional Classification: Major Collector

Traffic Data

	Existing	Design/Proposed
Year	2007	2031
ADT (vpd)	2,380	2,380
Number of Lanes	2	2
Type of Lanes	thru	thru
Pavement Width (ft)	11’ per lane	12’ per lane
Shoulder Width (ft)	2’	4’
Median Width (ft)	N/A	N/A
Sidewalk Width (ft)	N/A	N/A

Trucks: 5 % **Designed Speed:** mph **Legal Speed:** 55 mph **DHV:** 290

Setting: [ ] Urban [ ] Suburban [✓] Rural

Topography: [ ] Level [✓] Rolling [ ] Hilly

Facility on New Location or Realignment [✓] Yes [ ] No

Remarks: The project will realign SR 794 to provide minimum standoff distances between the roadway and the OANG base, as required under Department of Defense United Facilities Criteria.

Substantial Change in Access Control [ ] Yes [✓] No

Remarks: The existing SR 794 is not a limited access facility and the proposed realignment of SR 794 is not proposed to be limited access.

Involvement with Existing Bridge(s) [ ] Yes [✓] No

Remarks: There are no bridges within the project construction limits.

MAINTENANCE OF TRAFFIC

	Yes	No
Is a temporary bridge proposed?		X
Is a temporary roadway proposed?		X
Will the project involve the use of a detour or require a ramp closure? (*If YES, then:*)	X	
Provisions will be made for access by local traffic and so posted.	X	
Provisions will be made for through-traffic dependent businesses.	X	
Provisions will be made to accommodate any local special events or festivals.		N/A
Will the proposed MOT substantially change the environmental consequences of the action?		X
Is there substantial controversy associated with the proposed method of MOT?		X
Is there permanent alteration of the local traffic pattern?	X	

Remarks: Construction is expected to require six months. As much of the construction will be undertaken on new alignment, it will be possible to undertake most construction without closing existing SR 794. Access to the guard base will be maintained

MAINTENANCE OF TRAFFIC

throughout construction, with the east and west tie-ins constructed in separate phases.

Upon completion, the project will relocate local traffic not accessing the Springfield Airport/OANG base away from that facility. Otherwise, the project is not expected to have any effect on area traffic volumes or travel patterns.

To ensure that the public is notified of construction activities, the following plan note will be added to the project plans: The Contractor will advise the Project Engineer a minimum of 14 days prior to the following: the start of construction activities, lane closures, and or road closures. The Project Engineer will forward this information to the Clark County Engineer. The Clark County Engineer will, in turn, notify the public, the local emergency services, affected schools and businesses, and any other impacted local public agency of any of the above mentioned items, via media sources.

RIGHT-OF-WAY AND UTILITY INVOLVEMENT

Right-of-Way

Number of parcels to be affected for temporary ROW:	0	
Number of parcels to be affected for permanent ROW:	12	
Approximate area of temporary right-of-way needed:	0	acre
Approximate area of permanent right-of-way needed:	24.6	acre

Remarks: Over half of the right-of-way acquisition (4 parcels totaling approximately 12.9-acre) will be taken from the City of Springfield, a proponent of the project. From privately held parcels, right-of-way takes will occur either adjacent to the existing roadways or along fencelines.

Utilities

	Yes	No
Has Utility Coordination been completed?		X
Are large scale transmission facilities located within the project area?		X
Are there any private utility easements within the project area?	X	
If YES, will it be impacted by the project?	X	

Remarks: The project will require relocation of several overhead utility poles and associated lines located within the proposed roadway alignment. The elevations of two water lines may need to be adjusted to maintain adequate ground cover. A private utility easement is located partially within the corridor and any utilities within that portion of the easement will need to be relocated.

Utilities were initially notified of the project through the OUPS request for field location of lines. The project design team will submit Stage 1 plans to all identified utilities within the corridor, including those that did not respond to the OUPS request. Any utility relocation issues will be addressed as design progresses. The County must ensure that all necessary utility coordination is undertaken prior to construction.

ECOLOGICAL RESOURCES

Streams, Rivers, & Watercourses Present [X] **Yes** [ ] **No******

	Presence		Impacts	
	Yes	**No***	**Yes*****	**No****
Streams, Rivers & Watercourses			X	
National Scenic River		X		X
State Wild, Scenic or Recreational River		X		X
Commercial		X		X
Non-Commercial	X		X	

Ohio EPA Aquatic Life Use Designation (e.g. WWH): See table below

ECOLOGICAL RESOURCES

Remarks: An Ecological Survey Report was prepared for the project corridor in 12-2009. As detailed below, six streams are located within the project area. Three of the streams will be impacted by the project.

Feature Name	Feature Type	Linear Involvement	Acreage Affected	Stream Loss %
UT1 to UT2	Non-RPW, ephemeral, Class II	0'	0A	0
UT2 to Mud Run	Non-RPW, ephemeral, Class III	420'-530'	<0.02A	29-37
UT3 to UT2	Non-RPW, ephemeral, Class III	60'-130'	<0.006A	14-32
UT4 to UT2	Non-RPW, ephemeral, Class II	0'	0A	0
UT5 to Mill Creek	Non-RPW, intermittent, Class II	120'-145'	<0.01A	26-32
Mill Creek	RPW, perennial, WWH	0'	0	0

The above stream involvement is necessary to allow for replacement of the existing culvert carrying UT2 under SR 794, realignment of UT2 south of the culvert, minor involvement with UT3 (which enters UT2 near the culvert inlet), and installation of a culvert to carry UT5 under the new roadway segment.

All of the streams have drainage areas of less than 20 square miles and none are classified as exceptional warmwater habitats or coldwater habitats. The project will not be subject to in-stream work restrictions due to drainage area or habitat quality.

As part of the coordination under the Endangered Species Act and Fish and Wildlife Act, pre-application coordination was initiated with the USACOE. This coordination included a request for jurisdictional determination (see Attachment G); a response has not yet been received.

The project is not located within 1000' of a designated scenic river.

Relevant portions of the Ecological Survey Report are provided in Attachment F.

Other Surface Waters Present [ ] Yes [X] No****

Remarks: An Ecological Survey Report was prepared for the project corridor in 12-2009. No lakes, ponds or reservoirs were identified within the project construction limits. Relevant portions of the Ecological Survey Report are provided in Attachment F.

Wetlands Present [X] Yes [ ] No****

	Impacts Yes***	Impacts No**
Wetlands	X	

Total wetland area impacted: 0.003 acre(s)

(If a determination has not been made for non-isolated wetlands, fill in the total wetland area impacted above.)

Non-isolated Wetland			Isolated Wetland		
OEPA Wetland Category:	Category 1		OEPA Wetland Category:	N/A	
Size of Area Impacted:	0.003	acre(s)	Size of Area Impacted:	0	acre(s)

Wetlands	Documentation Yes	Documentation No
Wetland Determination		X
Wetland Delineation Report	X	
Individual Wetland Finding	X	
USACE Isolated Waters Determination		X
Mitigation Plan		X

ECOLOGICAL RESOURCES

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):	**Yes**	**No**
Substantial adverse impacts to adjacent homes, business or other improved properties;	X	
Substantial increased project costs;	X	
Unique engineering, traffic, maintenance, or safety problems;		X
Substantial adverse social, economic, or environmental impacts, or		X
The project not meeting the identified needs.		X

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks section.

Remarks: An Ecological Survey Report was prepared for the project corridor in 12-2009. The following wetlands were identified within the project area:

Feature Name	Wetland Type	Total Acreage	Affected Acreage
Mill Creek	Adjacent, Category 1/2	4.74A	0
Wetland A	Isolated, Category 1	0.22A	0
Wetland B	Abutting, Category 1	0.04A	0
Wetland C	Adjacent, Category 1	0.01A	0.003 (30% loss)

Wetland C is located near the inlet of the existing culvert carrying UT2 under SR 794. Wetland involvement will be minimized to the extent practicable, while still allowing work at the culvert location.

Project alternatives included consideration of full avoidance of the wetland. However, due to the wetland's proximity to the culvert, it is not possible to undertake construction activities at the culvert without affecting Wetland C. The existing culvert, which is comprised of a mix of original construction and prior extensions, is of inadequate width to accommodate the necessary roadway improvements. Failure to extend or replace the culvert will result in roadway geometric deficiencies at the culvert location. Failure to replace (rather than extend) the culvert will result in on-going maintenance issues at the culvert location.

As part of the coordination under the Endangered Species Act and Fish and Wildlife Act, pre-application coordination was initiated with the USACOE. This coordination included a request for jurisdictional determination; a response has not yet been received.

Relevant portions of the Ecological Survey Report are provided in Attachment F.

Terrestrial Habitat Present	X	**Yes**		**No******
Removal of Trees/Vegetation	X	**Yes**		**No**

	Presence		**Impacts**	
	Yes	**No******	**Yes*****	**No****
Terrestrial Habitat			X	
Unique or High Quality		X		N/A

Remarks: An Ecological Survey Report was prepared for the project corridor in 12-2009. Seventeen trees to be removed under this project were identified that exhibit potential Indiana bat roost habitat. None were identified as potential maternity roost trees.

The survey report did not identify any other unique or high quality terrestrial habitat.

Relevant portions of the Ecological Survey Report are provided in Attachment F.

Threatened or Endangered Species (Listed or Designated)	X	**Yes**		**No******

	Presence		**Impacts**	
	Yes	**No******	**Yes*****	**No**
Threatened or Endangered Species			X	
Within the known range of any federal species?	X		X	
Federal species found in the project area?		X		N/A
State species found in the project area?		X		N/A

ECOLOGICAL RESOURCES

Is the project in accordance with the Letter of Agreement on Endangered Species Coordination? ☐ **N/A**

Remarks:

The project is located within the known habitat ranges of the Indiana bat (federally-listed endangered), the eastern prairie fringed orchid (federally-listed threatened), and the eastern massasauga rattlesnake (federally-listed candidate). As indicated in the Ecological Survey Report (12-2009), the ODNR Natural Heritage Database indicates that the upland sandpiper (State-listed threatened) inhabits portions of the adjacent Springfield Airport and OANG base.

Indiana bat: The project will require the removal of 17 trees offering potential summer roost habitat for the Indiana bat. As the trees will be removed during the appropriate season, no direct take of Indiana bats is expected. The surrounding area offers many suitable roost trees. ODOT OES determined that the project **may affect, and is likely to adversely affect** this species. As provided for in the *Programmatic Biological Opinion for the Indiana Bat* (issued 01-27-2007), the project will avoid, minimize and/or mitigate for the adverse effects by (1) prohibiting tree removals from 04-01 to 09-30 (Avoidance Measure A-1) and (2) applying credits for the Indiana bat summer ecology study (Mitigation Measure M-6). Additionally, as requested by USFWS, the project team will be instructed to save large dead or dying trees within the project limits to the extent possible.

Eastern Prairie Fringed Orchid: No suitable habitat for this species was identified. ODOT OES determined that the project will have **no effect** on this species.

Eastern Massasauga Rattlesnake: No known populations of this snake have been identified near the project area and the potentially suitable habitat for the snake has been previously disturbed. ODOT OES determined that the project will have **no effect** on this species.

Upland Sandpiper: In the vicinity of the reported records of the upland sandpiper, the proposed work will occur on and adjacent to roadways; such areas do not offer habitat for this species. ODOT OES determined that the project is not expected impact this species or its habitat.

Relevant portions of the Ecological Survey Report are provided in Attachment F. ODOT OES effect determinations are presented in the agency coordination letters in Attachment G.

Agency Coordination ☐ Yes ☐ No

Agency Coordination ***	Coordination Yes	Coordination No*	Coordination Date	Approval Yes***	Approval No**	Approval Date
National Park Service (NPS) National Scenic River		X			N/A	
Ohio Environmental Protection Agency (OEPA)	X		12-14-2009		N/A	
Ohio Department of Natural Resources (ODNR)	X		12-14-2009	X		01-15-2010
ODNR State Scenic River		X			N/A	
United States Army Corp of Engineers (USACE)	X		12-14-2009		N/A	
United States Fish and Wildlife Service (USFWS)	X		12-15-2009	X		01-26-2010

Remarks:

On 12-14-2009, ODOT OES initiated site-specific coordination of the project with ODNR. On 01-15-2010, ODNR concurred that the project is unlikely to affect the upland sandpiper. ODNR raised no objections to the project.

On 12-15-2009, ODOT OES initiated site-specific review of the project with USFWS. On 01-26-2010, USFWS concurred with ODOT's determinations that the project will not affect the eastern prairie fringed orchid or the eastern massasauga rattlesnake. USFWS issued a Tier 2 biological opinion regarding the project effects on the Indiana bat, consistent with the consultation process provided in the *Programmatic Biological Opinion [PBO] for the Indiana Bat* (issued 01-27-2007). USFWS determined that the project will result in an incidental take of approximately 4.81-acre. USFWS concluded that the level of anticipated and exempted take of Indiana bats from the proposed project, in conjunction with other actions taken by ODOT pursuant to the PBO to date, is not likely to result in jeopardy to the species.

On 12-14-2009, ODOT OES undertook pre-application coordination with USEPA and OEPA. Neither agency responded within the 30-day comment period.

Agency coordination letters are provided in Attachment G. The Programmatic Biological Opinion is available at www.dot.state.oh.us/Divisions/TransSysDev/Environment/Ecological_Resources_Permits/Ecology/ Documents/ Agreements/ ODOTPBO012607.pdf

ECOLOGICAL RESOURCES

[Note – The ODOT OES communications with ODNR and USFWS stated no wetland involvement; the Ecological Survey Report did indicate wetland involvement. The USFWS response noted that the project would affect 0.003-A of wetland. In a 02-01-2010 phone call with Tricia Bishop of ODOT District 7 Environmental, Brian Mitch with ODNR confirmed that the coordination with ODNR remained valid.]

** If the resource is not present, the remainder of this section is not completed. State how and who made this determination.*
*** If the resource is present but no impacts are anticipated, the reason why is described under Remarks.*
**** Any impacts, mitigation, and agency coordination are described under Remarks and coordination letters are attached.*
***** If "no", discuss in the Remarks detail how this determination was made.*

OTHER RESOURCES PRESENT

Drinking Water Resources — ✓ Yes ☐ No*

	Presence: Yes	Presence: No*	Impacts: Yes	Impacts: No
Drinking Water Resources				
Sole Source Aquifer		✓		N/A
Source Water Protection Area(s)		✓		N/A
Public Water System(s)		✓		N/A
Groundwater Source	✓			✓
Surface Water Source		✓		N/A
Residential Well(s)	✓			✓

Remarks:

The project area is not located within the boundaries of a designated sole source aquifer for source water protection area. The project is located in an area served by private wells. Springfield Airport and the OANG maintain wells for public water supply at these facilities. A note required precautions to protect groundwater resources will be included in the plans.

Documentation is provided in Attachment H.

Flood Plains — ☐ Yes ✓ No

Remarks:

According to the FEMA Flood Insurance Rate Mapping (FIRM) of the project area (Community Panel Number(s) 390732-0325-A, effective 07-02-1987), the project does not lie within a designated special flood hazard area. Therefore, no coordination is necessary with the local flood plain administrator and no flood plain permit is needed for the proposed project.

Documentation is provided in Attachment H.

Farmland — ✓ Yes ☐ No

	Presence: Yes	Presence: No*	Impacts: Yes	Impacts: No
Farmland				
Active Agricultural Lands	✓		✓	
Agricultural District		✓		N/A

	Yes	No
Project in compliance with ORC 929.05(a)	✓	
FPPA Project Screening Sheet		✓
Farmland Conversion Impact Rating Sheet	✓	

Remarks:

Field and literature reviews for the project were completed in 2007-2009 by District Environmental.

Although much of the project corridor is in agricultural use, most is publicly owned by the City of Springfield. The proposed corridor will extend through two privately held cultivated properties (110.78A and 99.97A). The Clark County Recorder's and Auditor's Offices staff were unfamiliar with a property owner's ability to file for Agricultural District status under ORC 929.05(a), indicating that it is unlikely either property has such status. However, even if these two privately held parcels have Agricultural District status, total acquisition from each is less than 10 acres and the project would be in compliance with ORC 929.05(a).

OTHER RESOURCES PRESENT

	Part VI of the Farmland Conversion Impact Rating Form was completed for the project by District Environmental and the Clark County NRCS District Conservationist. The "Total Points" have been determined to be 110 points. Projects with a total rating of less than 160 require no special considerations with respect to farmland. Documentation is provided in Attachment H.

** If the resource is not present, the remaining boxes for this subject will not be completed. State how and who made this determination.*

CULTURAL RESOURCES

Results of Research

NRHP Eligible and/or Listed Resources Present	Yes	No
Prehistoric Archaeology		✓
Historic Archaeology		✓
History/Architecture		✓
Buildings/Sites/Objects		✓
Districts		✓
Bridges		✓

Project Effect

No Potential to Cause Effects	
No Historic Properties Affected	✓
No Adverse Effect	
Adverse Effect	

Remarks:

ODOT OES evaluated the five existing residential properties structures within the corridor that are over 50 years of age; all were determined not eligible for the NRHP. ODOT OES completed a Phase I Archaeological Survey of the corridor. Two previously unrecorded prehistoric archaeological sites were identified. These sites represent isolated finds and are not eligible for the NRHP.

On 08-21-2009, in accordance with Stipulation 4B of the *Programmatic Agreement Among The Federal Highway Administration, The Advisory Council On Historic Preservation, The Ohio Historical Society, State Historic Preservation Office, And The State Of Ohio, Department of Transportation Regarding the Implementation Of the Federal-Aid Highway Program in Ohio* (Agreement 12642; executed 07-17-2006) and in accordance with 36 CFR Section 800.4(d)(1), ODOT OES determined that a finding of "no historic properties affected" is appropriate for the project, based on the following:

- No significant previously known archaeological resources will be affected.
- No properties within the Area of Potential Effects (APE) are eligible for or listed in the NRHP.
- The Marquet-Mercer Farm is located about 1000 feet north of the east end of the project area and is entirely outside the APE.
- Two of the houses in the APE (1816 W. Blee and 5232 Peacock) are mid-twentieth century vernacular brick houses; neither is eligible for listing in the NRHP.
- The stone school building at 5017 Peacock is not significant and does not retain integrity of materials; it is not eligible for listing in the NRHP.
- Archaeological sites 33CL583 and 33CL584 are not eligible for the NFHP and no further archaeological investigations are recommended.
- The level of disturbance across the APE precludes the existence of any significant archaeological resources. No further archaeological investigations are required unless the scope of the proposed undertaking changes.

The OHPO has not objected to this finding pursuant to the Section 106 Agreement (PA 12642) referenced above. Therefore, no further cultural resources investigations are required. Documentation is provided in Attachment I.

SECTION 4(f)/6(f) RESOURCES

Parks & Other Recreational Land	☐ **Applies**	✓ **Does Not Apply**
Natural, Wildlife, & Waterfowl Refuges	☐ **Applies**	✓ **Does Not Apply**
Cultural Resource Areas	☐ **Applies**	✓ **Does Not Apply**

Documentation	Yes	No	FHWA/OES Approval Dates
Section 4(f) Determination of No-Use		N/A	
De Minimis Section 4(f) Evaluation		N/A	
Programmatic Section 4(f) Evaluation		N/A	
Individual Section 4(f) Evaluation		N/A	
Section 6(f) Involvement		N/A	

Remarks: Based on field inspections, review of County Auditor records and local maps, and land use information provided by local agencies, there are no public parks/recreation facilities, wildlife/waterfowl refuges, or public or privately-owned historic properties in the project area. No Section 4(f) or 6(f) resources will be used by this project.

** If the resource is not present, the remaining boxes for this subject will not be completed. State how and who made this determination.*
*** If the resource is present but no impacts are anticipated, the reason why is described under Remarks.*
**** Any impacts, mitigation and agency coordination are described under Remarks and coordination letters are attached.*
***** If "No", discuss in the remarks section details about how this determination was made.*

AIR QUALITY & NOISE

	Yes	No
Will the project move the travel lanes closer to sensitive areas?	✓	

Air Quality

Conformity Status of Project	Yes	No
Is the project in an air quality non-attainment or maintenances area?	✓	
Criteria pollutant in non-attainment or maintenance: PM 2.5 ✓ PM 10 ☐ Ozone ✓ CO ☐		
Is the project on the STIP?	✓	
Is the project in the most recent MPO air quality conforming TIP?	✓	
If NO, is the project exempt from air quality conformity?	N/A	
Is a project level PM 2.5 conformity determination required for this project?	✓	
If YES, has FHWA issued a conformity determination?	✓	

Project-Level Analysis and Impacts	Yes	No
Has the project scope changed substantially since the conformity analysis?		✓
If YES, will this change require a reevaluation of the MPO TIP conformity?		✓
Is a PM 2.5 analysis required for this project?		✓
Is an air toxics (MSAT) analysis required for this project?	✓	

Type of Analysis: Qualitative ✓ Quantitative ☐

Remarks: Clark County is in non-attainment for particulate matter (PM 2.5) and is a maintenance area for 8-hour ozone. The project was included in the conformity analysis for the 2008-2011 Clark County-Springfield Transportation Coordinating Committee (MPO) Transportation Improvement Plan and the State Transportation Improvement Plan. The project has been determined to not result in a significant increase in diesel trucks and/or buses. On 05-28-2009, FHWA confirmed that the project is not considered a project of air quality concern and does not require a PM 2.5 or PM 10 hot-spot analysis. The USEAP also concurred on 05-18-2009. No further evaluation of the project for the six criteria pollutants monitored by the USEPA as indicators of air quality (ozone, SO2, NO2, CO, lead, and particulate matter) is required.

A Qualitative MSAT Analysis was prepared for the project by District 7 Environmental. The average daily vehicle miles traveled (VMT) estimated under the preferred Build Alternative (realignment of SR 794) will increase by 2% over the No Build Alternative. The realignment of SR 794 will increase the overall length of the roadway by approximately 0.1-mile.

AIR QUALITY & NOISE

The project is located within an agricultural area, with scattered single-family homes. The project will shift the traffic on SR 794 closer to homes on Peacock Road, north of the existing SR 794/Peacock Road intersection. This could result in these receptors being exposed to higher MSAT emissions than under the No Build alternative. The magnitude and duration of these potential increases compared with the No Build alternative can not be accurately quantified due to the inherent deficiencies in current models. On 05-20-2009, the OEPA concurred that the project meets the criteria of a low potential MSAT effect.

This type of project has been evaluated and found to have no significant effect upon air quality. Based on a documented CO agreement between ODOT and OEPA, a detailed Air Quality Analysis is not necessary for individual highway projects that are a modification to an existing highway that will not cause an increase in the average daily traffic of more than 10,000 vehicles within 10 years after the modification and a new project ROW that will not have an average daily traffic of more than 20,000 vehicles within 10 years of construction.

Documentation is provided in Attachment J.

Noise

Conformity Status of Project	Yes	No
Is a noise analysis required in accordance with FHWA regulations and ODOT's statewide noise abatement policy?	✓	
If YES, is a design year noise impact predicted?		✓
If YES, have all noise attenuation measures been considered, consistent with the policy?		**N/A**
If NO, explain why not:		
Is noise attenuation found to be reasonable and feasible?		**N/A**

Remarks: Three noise sensitive land uses (all single-family homes) that could be affected by the proposed realignment were identified within the project area: 1816 W. Blee Road, 4946 Peacock Road, and 5017 Peacock Road.

ODOT OES Air & Noise staff prepared a Noise Screening for the project. Based on the modeling, there are no predicted design year noise impacts associated with the project, since none of the levels approach or exceed the Noise Abatement Criteria (NAC) of 67 dBA and since there is no predicted substantial extraordinary increase in noise. Further consideration for noise abatement is unwarranted.

Documentation is provided in Attachment K.

COMMUNITY IMPACTS

Regional, Community, & Neighborhood Factors	Yes	No
Will the proposed action comply with the local/regional development patterns for the area?	✓	
Will the proposed action result in substantial impacts to community cohesion?		✓
Will the proposed action result in substantial impacts to the local tax base or property values?		✓
Will the proposed action result in reasonably foreseeable secondary or cumulative impacts?	✓	
Are there any Title VI communities in the project area? (*Explain in Remarks.*)	✓	

Remarks: The proposed project is being undertaken by Clark County and was developed with input from other local agencies, including the City of Springfield and the Springfield-Clark County Transportation Coordination Committee (the metropolitan planning organization for the region). The project is consistent with local and regional plans for the region. The proposed project will allow the OANG base to meet force protection requirements. Failure to meet force protection requirements could result in the closure of the facility, to the detriment of the region. The selected alignment was developed with consideration for future expansion of the OANG base (currently underway).

The new alignment will extend through agricultural fields and will not create barriers to neighborhoods. Details regarding the makeup of the surrounding area are provided under "Environmental Justice" below.

Much of the project will be undertaken on agricultural lands controlled by the City of Springfield. From privately held parcels, right-of-way takes will occur either adjacent to the existing roadways or along fencelines. The project will not split privately owned agricultural properties and should not have a substantial effect on the local tax base or property values.

Public Facilities & Services	Yes	No
Will the proposed action result in substantial impacts on health and educational facilities, public utilities, fire, police,	✓	

COMMUNITY IMPACTS

emergency services, religious institutions, public transportation or pedestrian and bicycle facilities?

Remarks: Maintaining access between US 68 and SR 72 is vital to law enforcement and emergency response times. Construction of the new link prior to closure of the old roadway will ensure that there will be no impacts to response times or other public facilities.

Environmental Justice (Presidential Executive Order 12898)	**Yes**	**No**
During Public Involvement activities, were Environmental Justice issues raised?		X
Are any Environmental Justice populations located within the project area?		X
Will the project result in any adversely high or disproportionate impacts to the population?		X

Remarks: As of the 2000 US Census, 317 individuals lived within a 0.5-mile radius of the project corridor. Of those, minorities represented 4.2% of the population and individuals in poverty represented 7.6% of the population. For Clark County overall, minorities represented 12.4% of the population and individuals in poverty represented 10.4% of the population. Documentation is provided in Attachment L.

The project area is sparsely populated and does not have concentrated areas of minority or low-income populations.

Based upon the nature of the proposed project and the makeup of the surrounding population, the proposed action is not anticipated to result in any disproportionately high and adverse effects to minority or low-income populations. Nor is the proposed action anticipated to result in the denial of, reduction in, or significant delay in receipt of benefits by minority and low-income populations.

Displacement of People, Businesses or Farms	**Yes**	**No**
Will the proposed action displace people, businesses, or farms?		✓

Number of displacements: Residences: **0** Businesses: **0** Farms: **0** Institutions: **0**

Remarks: There will be no displacements under this project.

PUBLIC INVOLVEMENT

Per ORC 5511.01 and 23 CFR 771.111 (h)(2)(i) and (ii), every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

Discuss what public involvement activities (letters to affected property owners and residents, meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Were you inclusive of minority and low income people in your public involvement activities? **Yes*** ✓ **No**

** If YES, explain how.*

Were project notification letters sent for the proposed project? **Yes** ✓ **No****

*** If NO, explain why not.*

If YES, what date were they sent? ***Date:*** 10-23-2008

Was a Public Involvement Meeting held for the project? **Yes** ✓ **No**

If YES, what date was the meeting held? ***Date:*** 07-2005 & 10-2005

**** If multiple meetings were held, state the 1st meeting date above and give the other meeting dates and explanations in the Remarks Section.*

Remarks: As of the 2000 US Census, there were no non-English-speaking individuals residing within 0.5-mile of the project area.

As summarized in the Public Involvement discussion of the *CLA-West Blee Road (SR 794) Sub-Area Study* (see Attachment M), extensive public involvement activities were undertaken prior to selection of the preferred alternative. These activities included stakeholder interviews, newsletters, two public meetings (July 2005 and October 2005), web postings, and at least twelve news articles. The complete Sub-Area Study is available for viewing or download on the Springfield-Clark County Transportation Coordinating Committee (TCC) website.

As the local metropolitan planning organization, the TCC initially supported Alternative D4. However, in response to public opposition to Alternative D4 and public support of Alternative D1, the TCC and project team elected to proceed with

PUBLIC INVOLVEMENT

development of Alternative D1.

Some comments suggested that inadequate notice was provided to the public. However, meeting attendance (75 individuals at the July 2005 meeting and 66 individuals at the October 2005 meeting), the volume of written responses (approximately 100), and a petition with 637 signatures indicate that the project was well-advertised. As previously noted, the 2000 US Census indicates that 317 individuals live within a 0.5-mile radius of the project corridor.

On 10-23-2008, the Clark County Engineer notified (by letter) area residents/property owners and other known project stakeholders of the County's intention to proceed with project development of Alternative D1. Residents were invited to comment on the project's effects, including the projects effects on air quality, the local economy, and historic/cultural resources. No specific comments regarding environmental effects were received.

In general, public comments generated during the Sub-Area Study indicated support of Alternative D1 over Alternative D4. Support of Alternative D1 primarily focused on preservation of private property and resources. The following were the comments specific to the adverse environmental effects of Alternative D1:

- **Alternative D1 "will result in deforestation of two woodland sites".** Alternative D1 will result in the loss of trees from the south lines of two woodlots, but will not eliminate these woodlots. The woodlots total approximately 12.8 acres; the project will result in the loss of approximately 4.8-acre of these woodlots (38%).
- **"What happens to our plentiful, healthy water supply (as the whole area has wells) if excavation through and/or around this area cause extensive contamination of the water."** As detailed in "Hazardous Materials and Regulated Substances" (below), the landfill limits are well delineated and are located fully outside of the project's proposed construction limits and the project will have no involvement with the landfill. A note requiring precautions (spill prevention/containment) to protect groundwater resources will be included in the plans.

In its 10-23-2008 mailing, the County invited residents to comment on the project's effects, including the projects effects on air quality, the local economy, and historic/cultural resources. One individual commented regarding several issues: air quality issues linked to the OANG base which do not relate to the project; and whether public input was considered in the selection of the preferred alternative. The response from the county documented the recommendation process through the CCSTCC committees and how the choice of the preferred alternative was revised partially based on input from the public. No other specific comments regarding environmental effects were received in response to the 10-23-2008 mailing.

Public involvement activities including direct mailings, public notices, public meetings and web-postings to potentially-affected residents, property owners, and other stakeholders were inclusive of minority and low income populations within the study area.

Public Controversy on Environmental Grounds

Will the project involve substantial controversy concerning community and/or natural resource impacts? **Yes** ☐ **No** ☑

Remarks: As detailed above, there was no substantial controversy on environmental grounds.

HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation	Yes	No	Concurrence Date
Environmental Site Assessment Screening/Checklist	✓		
Phase I Environmental Site Assessment		✓	
Phase II Environmental Site Assessment		✓	
Design for Remediation		✓	

Remarks: District 7 Environmental completed an ESA Screening of the project corridor in April 2009. The Screening did not identify any concerns associated with the agricultural fields, the vacant site of a former farmstead, or the existing single-family homes located within or adjacent to the corridor.

A portion of the proposed roadway will be located immediately north of the closed Springfield Landfill. The project will not require temporary or permanent acquisition from the landfill.

No permanent ROW from the OANG base will be required.

HAZARDOUS MATERIALS & REGULATED SUBSTANCES

The project will not include installation of storm sewers, so no deep excavation is anticipated adjacent to either the closed Springfield Landfill or the OANG facility.

In the absence of permanent acquisition from the OANG facility or the Springfield Landfill and in the absence of deep excavation, the District recommended no additional ESA investigations or special materials management notes in connection with the project. On 05-18-2009, ODOT OES concurred.

Documentation is provided in Attachment N.

PERMITS

OES/Agency Permit Determination (PD) Required [X] Not Required [ ] Complete? **Yes** [X] **No** [ ]

Army Corp of Engineers (404/Section 10 Permit)	**Required**	**Not Required**	**Approval Date**	**Expiration Date**
Individual (IP)		X		
Nationwide (NWP) *No(s).* 14	X		TBD	
Pre-Construction Notification (PCN)	X		TBD	
Ohio Environmental Protection Agency (OEPA)	**Required**	**Not Required**	**Approval Date**	**Expiration Date**
Level 1 Review – General Isolated Wetland Permit		X		
Level 2 Review – Individual Isolated Wetland Permit		X		
Level 3 Review – Individual Isolated Wetland Permit		X		
401 Water Quality Classification (WQC)	X		TBD	
NPDES Construction Storm Water Permit	X			
Other Permits	**Required**	**Not Required**	**Approval Date**	**Expiration Date**
U.S. Coast Guard Section 9 Bridge Permit		X		
Wetland and/or Stream Mitigation	X		TBD	
Flood Plain Permit		X		

Remarks:

ODOT OES Waterway Section has reviewed the project and determined that it meets the criteria for a probable Nationwide Permit 14 (linear transportation project). A Pre-Construction Notice will be required due to impacts to wetlands; mitigation for wetland impacts will be required. An individual 401 Water Quality Certification from the OEPA will be required if stream impacts will exceed 500'. Clark County, the project sponsor, must ensure that the necessary permit coordination is undertaken with USACOE and that the necessary certification is obtained from the OEPA prior to the plan file date. Clark County shall be responsible for any required mitigation. Upon agency approval, the permit and certification are to be noted on the plans and all conditions to the permit and certification must be incorporated into the plans.

The proposed project will cause over one acre of earth-disturbing activities. Clark County must ensure that a Notice of Intent is submitted to the Ohio EPA for coverage under the NPDES construction storm water permit. As required by the permit, a Storm Water Pollution Prevention Plan must be developed for the project.

ENVIRONMENTAL COMMITMENTS MADE AND RESOURCES TO BE AVOIDED

General Commitments:

Clark County must ensure that all necessary utility relocations have been coordinated prior to construction of the project.

Mature dead or dying trees within the project corridor are only to be removed as necessary for construction or to meet clear zone requirements. Any such trees located within the construction limits that can be preserved are to be marked "save" on the construction plans.

Due to the level of stream impacts, the project will require a Pre-Construction Notice to the USACOE and a 401 Water Quality Certification from the OEPA. Clark County, the project sponsor, must ensure that the necessary permit coordination is undertaken with USACOE and that the necessary certification is obtained from the OEPA prior to the plan file date. Clark County shall be responsible for any required mitigation. As agency coordination is expected to require up to 8 months, coordination should be initiated not less than 10 months prior to plan file. Upon agency approval, the permit and certification are to be noted on the plans and all conditions to the permit and certification must be incorporated into the plans.

The proposed project will cause over one acre of earth-disturbing activities. Clark County must ensure that a Notice of Intent is submitted to the Ohio EPA for coverage under the NPDES construction storm water permit. As required by the permit, a Storm Water Pollution Prevention Plan must be developed for the project.

If construction plans are modified to require additional temporary or permanent acquisition of right-of-way or deeper excavation, the findings of the environmental document must be reevaluated.

Plan Notes:

The following notes shall be added to the plans:

The Contractor will advise the Project Engineer a minimum of 14 days prior to the following: the start of construction activities, lane closures, and or road closures. The Project Engineer will forward this information to the Clark County Engineer. The Clark County Engineer will, in turn, notify the public, the local emergency services, affected schools and businesses, and any other impacted local public agency of any of the above mentioned items, via media sources.

Any unavoidable cutting of trees with suitable roosting and brood-rearing habitat for the Indiana bat (living or standing dead trees or snags with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities) will be performed only before April 1 or after September 30, when the species would not be using such habitat.

Best construction practices are to be implemented to minimize water quality impacts. A spill containment kit is to be maintained on-site throughout construction activities. Idle equipment, petrochemicals, and toxic/hazardous materials shall not be stored near drainage ways, ditches or streams. Refueling shall not be undertaken near drainage ways, ditches or streams. Spills of fuels, oils, chemicals, or other materials which could pose a threat to groundwater shall be cleaned up immediately. If the spill is a reportable amount, the local fire department is to be contacted.

When dewatering operations are necessary, best management practices to minimize turbidity and siltation in adjacent and nearby streams, shall be utilized. Appropriate measures include but are not limited to, not placing pump outlet hoses in streams, dewatering onto vegetated areas when practicable, suspending intakes and placing intakes on non-erodible surfaces to minimize silt intake.

County CLA **Route** SR 794 **Section** 00.60 **PID** 78677 **SJN** 479349

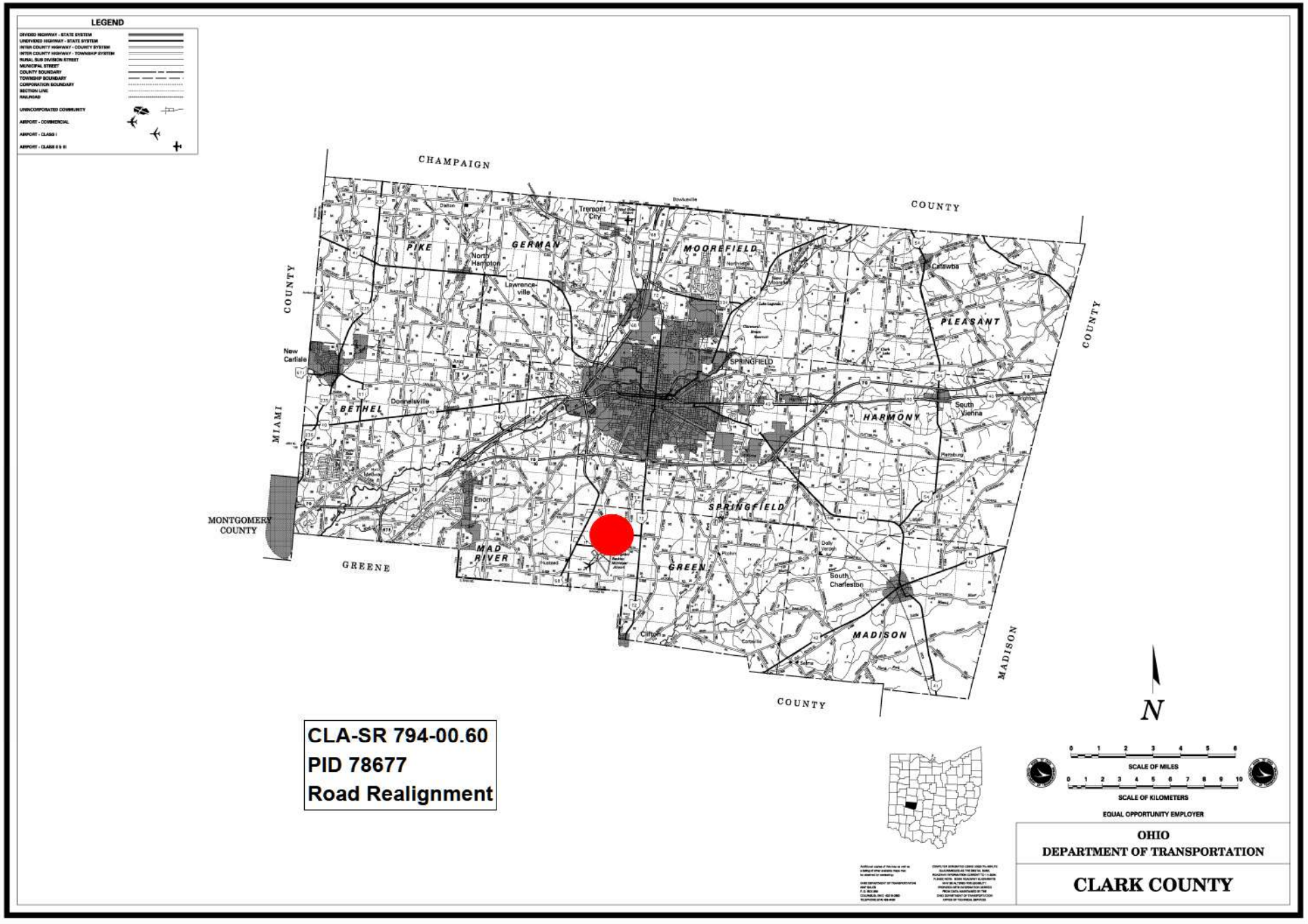
CONCURRENCE

It is hereby determined that the subject project meets the criteria for CE in accordance with the *Programmatic Categorical Exclusion Agreement* between ODOT and FHWA. This action does not: induce significant impacts to planned growth or land use for the area; require relocation of significant numbers of people; have significant impact on any natural, cultural, recreation, historic, or other resource; involve significant air, noise, or water quality impacts; have significant impacts on travel patterns; or otherwise, either individually or cumulatively, have any significant impacts and do not require the preparation of an Environmental Assessment or an Environmental Impact Statement.

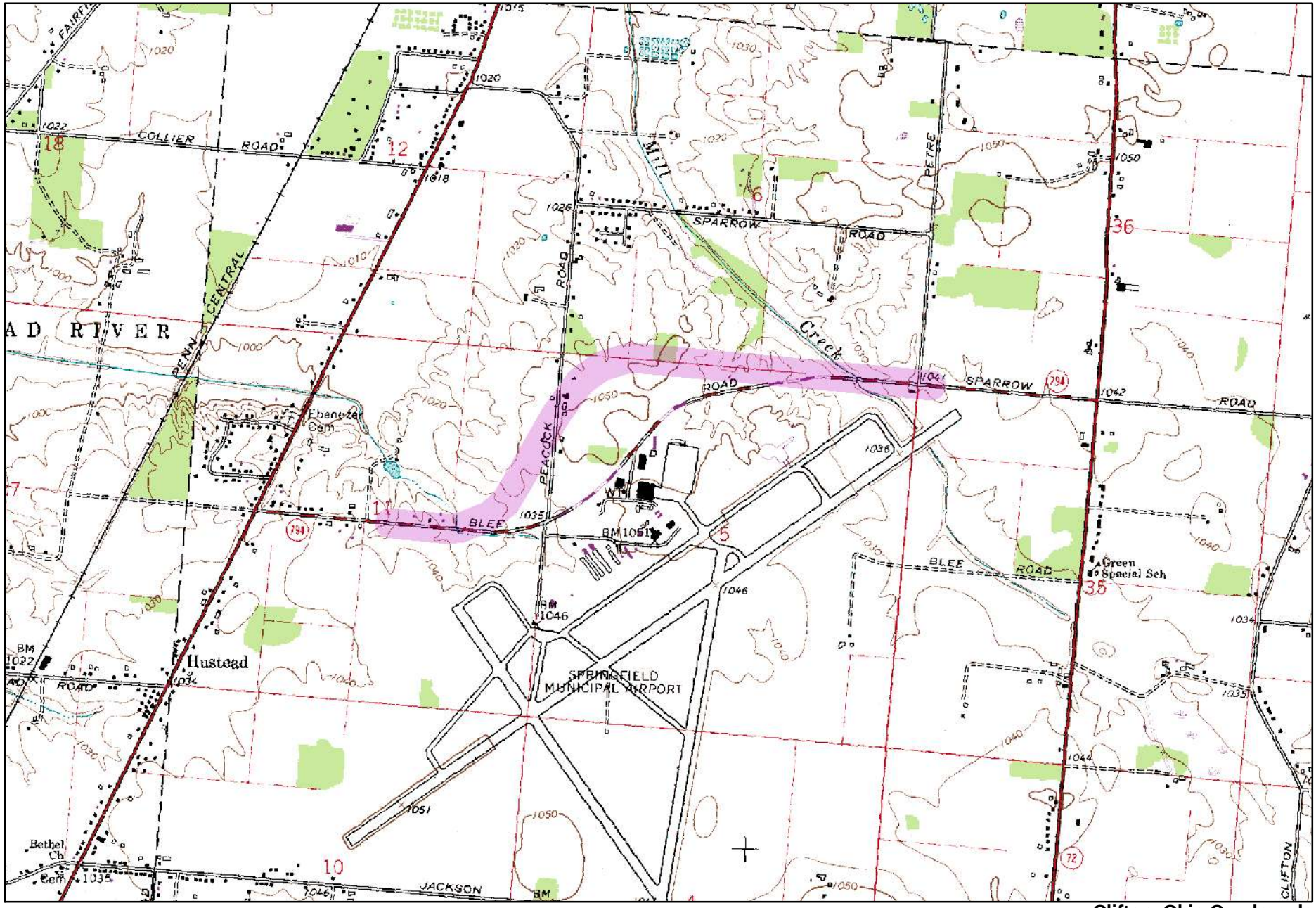
As supported by the information contained in this Categorical Exclusion Document, this project qualifies for a CE Level 3 , Item Number(s) 6 , in accordance with the *Programmatic Categorical Exclusion Agreement* between ODOT and FHWA dated 03-06-2003 .

Tricia Bishop, ODOT District 7 Environmental	03-11-2010
NAME OF PREPARER AND ORGANIZATION	**DATE**

DISTRICT ENVIRONMENTAL COORDINATOR	**DATE**	**DISTRICT PLANNING & PROGRAMS ADMINISTRATOR**	**DATE**
OFFICE OF ENV. SERVICES ADMINISTRATOR	**DATE**		



Attachment A-1



Clifton, Ohio Quadrangle

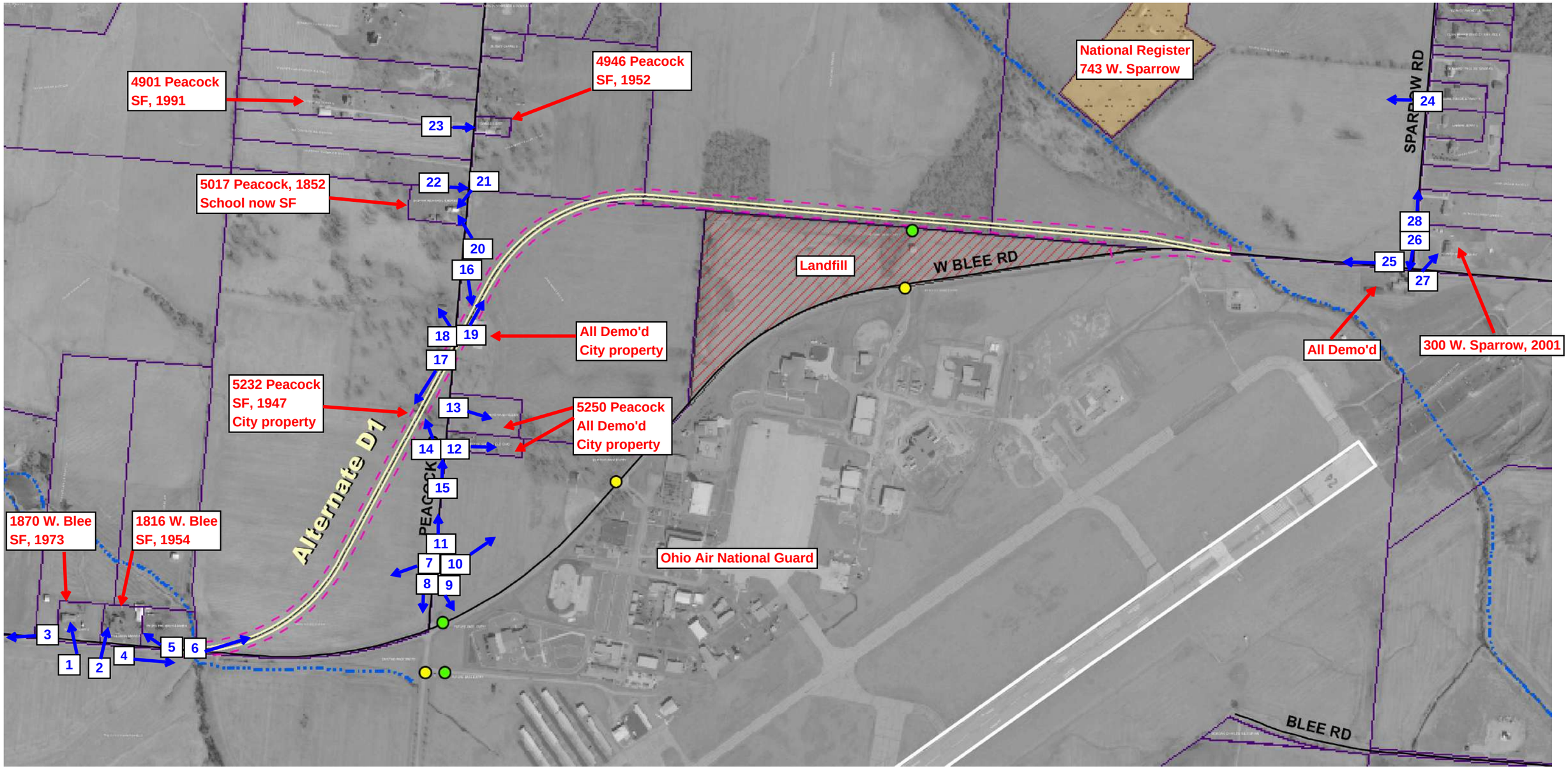
CLA-SR 794-00.60
PID 78677

SR 794 Sub Area Study - Preferred Conceptual Alternative

CLARK COUNTY-SPRINGFIELD
TRANSPORTATION COORDINATING COMMITTEE

http://www.clarktcc.com

Figure 9: Preferred Conceptual Alternative



Attachment A-4

1 – 1870 W. Blee, built 1973

2 – 1816 W. Blee, built 1954

3 – West along SR 794, from 1870 W. Blee

4 – East along SR 794, from 1870 W. Blee

5 – West along SR 794, near begin new alignment.

6 – Northeast along new alignment from SR 794.

7 – Southwest across new alignment, from Peacock.

8 – South along Peacock, toward intersection with SR 794.

9 – Southeast toward base, from Peacock.

10 – Northwest from Peacock, near intersection with SR 794.

11 – North along Peacock, near intersection with SR 794.

12 – Vacant City-owned lot at 5250 Peacock.

13 - – Vacant City-owned lot at 5250 Peacock.

14 – Northwest toward City-owned house at 5232 Peacock.

15 – North from 5250 Peacock.

16 – South in vicinity of new alignment across Peacock.

17 – Southwest along new alignment, from Peacock.

18 – Shed north of new alignment, from Peacock.

19 – Northeast along new alignment, from Peacock.

20 – 5017 Peacock, old schoolhouse, c.1852.

21 – 5017 Peacock, old schoolhouse, c.1852

22 – East toward north portion of new alignment, from Peacock.

23 – 4946 Peacock, built 1952.

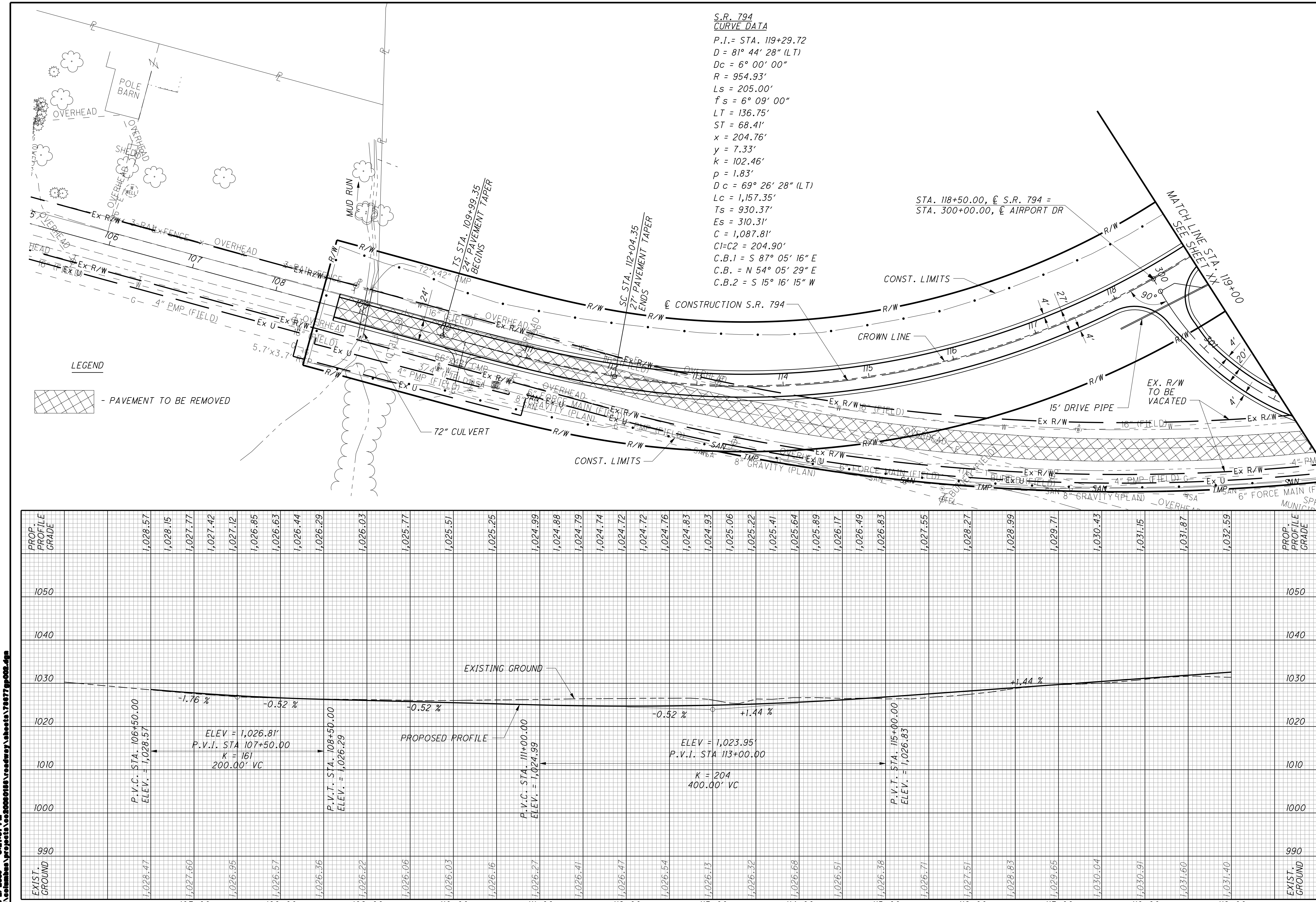
24 – National Register Site at 743 W. Sparrow.

25 – West along north portion of new alignment, from Sparrow.

26 – Vacant lot south of Sparrow at SR 794.

27 – 300 W. Sparrow, built 2001.

28 – North along Sparrow, from SR 794.


S.R. 794
CURVE DATA
P.I.= STA. 119+29.72
D = 81° 44′ 28″ (LT)
Dc = 6° 00′ 00″
R = 954.93′
Ls = 205.00′
f s = 6° 09′ 00″
LT = 136.75′
ST = 68.41′
x = 204.76′
y = 7.33′
k = 102.46′
p = 1.83′
D c = 69° 26′ 28″ (LT)
Lc = 1,157.35′
Ts = 930.37′
Es = 310.31′
C = 1,087.81′
C1=C2 = 204.90′
C.B.1 = S 87° 05′ 16″ E
C.B. = N 54° 05′ 29″ E
C.B.2 = S 15° 16′ 15″ W
TS STA. 109+99.35 24′ PAVEMENT TAPER BEGINS
SC STA. 112+04.35 27′ PAVEMENT TAPER ENDS
STA. 118+50.00, ℄ S.R. 794 = STA. 300+00.00, ℄ AIRPORT DR
MATCH LINE STA. 119+00 SEE SHEET XX
℄ CONSTRUCTION S.R. 794
CONST. LIMITS
CROWN LINE
15′ DRIVE PIPE
EX. R/W TO BE VACATED
72″ CULVERT
72″x42″ CMP
66″x42″ CMP
MUD RUN
POLE BARN
SHED
WELL
OVERHEAD
3-RAIL FENCE
4″ PMP (FIELD)
16″ (FIELD)
6″ FORCE MAIN (FIELD)
8″ GRAVITY (PLAN)
5.7′x3.7′ RCP
LEGEND
- PAVEMENT TO BE REMOVED
PROP. PROFILE GRADE
1,028.57 1,028.15 1,027.77 1,027.42 1,027.12 1,026.85 1,026.63 1,026.44 1,026.29 1,026.03 1,025.77 1,025.51 1,025.25 1,024.99 1,024.88 1,024.79 1,024.74 1,024.72 1,024.72 1,024.76 1,024.83 1,024.93 1,025.06 1,025.22 1,025.41 1,025.64 1,025.89 1,026.17 1,026.49 1,026.83 1,027.55 1,028.27 1,028.99 1,029.71 1,030.43 1,031.15 1,031.87 1,032.59
1050
1040
1030
1020
1010
1000
990
EXISTING GROUND
PROPOSED PROFILE
-1.76 %
-0.52 %
-0.52 %
-0.52 %
+1.44 %
+1.44 %
P.V.C. STA. 106+50.00 ELEV. = 1,028.57
ELEV = 1,026.81′
P.V.I. STA 107+50.00
K = 161
200.00′ VC
P.V.T. STA. 108+50.00 ELEV. = 1,026.29
P.V.C. STA. 111+00.00 ELEV. = 1,024.99
ELEV = 1,023.95′
P.V.I. STA 113+00.00
K = 204
400.00′ VC
P.V.T. STA. 115+00.00 ELEV. = 1,026.83
EXIST. GROUND
1,028.47 1,027.60 1,026.95 1,026.57 1,026.36 1,026.22 1,026.06 1,026.03 1,026.16 1,026.27 1,026.41 1,026.47 1,026.54 1,026.13 1,026.32 1,026.68 1,026.51 1,026.38 1,026.71 1,027.51 1,028.83 1,029.65 1,030.04 1,030.91 1,031.60 1,031.40
107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00

HORIZONTAL SCALE IN FEET (0 25 50 100)

CALCULATED AVP | CHECKED CSR

PLAN AND PROFILE
S.R. 794 - STA. 106+50.00 TO STA. 119+00.00

CLA-794-0.60

9 / 90

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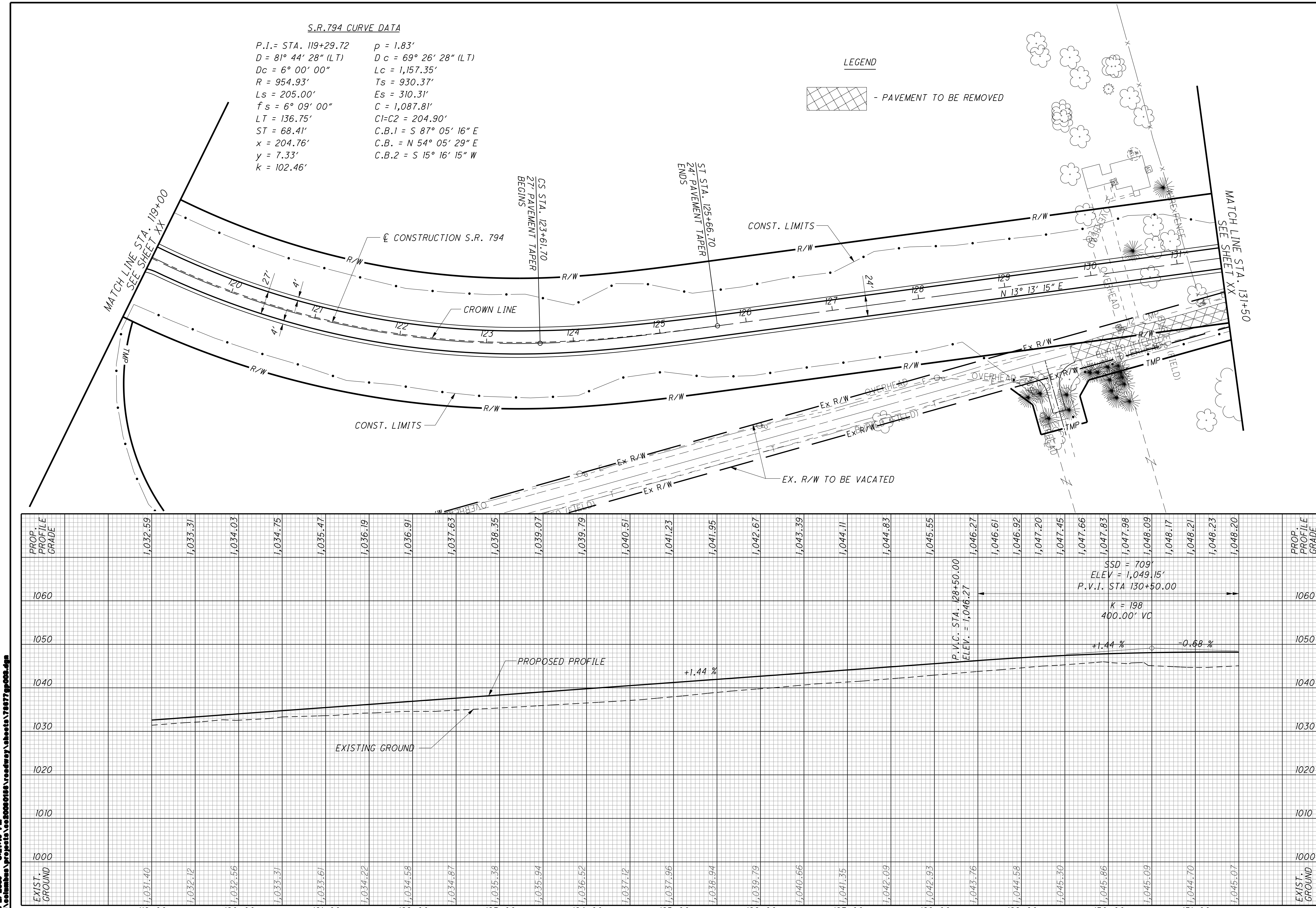
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R = 954.93′
Ls = 205.00′
f s = 6° 09′ 00″
LT = 136.75′
ST = 68.41′
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y = 7.33′
k = 102.46′
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Lc = 1,157.35′
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C = 1,087.81′
C1=C2 = 204.90′
C.B.1 = S 87° 05′ 16″ E
C.B. = N 54° 05′ 29″ E
C.B.2 = S 15° 16′ 15″ W
LEGEND
- PAVEMENT TO BE REMOVED
MATCH LINE STA. 119+00
SEE SHEET XX
MATCH LINE STA. 131+50
SEE SHEET XX
CS STA. 123+61.70
27′ PAVEMENT TAPER
BEGINS
ST STA. 125+66.70
24′ PAVEMENT TAPER
ENDS
℄ CONSTRUCTION S.R. 794
CROWN LINE
CONST. LIMITS
CONST. LIMITS
EX. R/W TO BE VACATED
N 13° 13′ 15″ E
R/W
Ex R/W
OVERHEAD
BURIED (FIELD)
TMP
12″ CMP
WIRE FENCE
WELL
AC
27′
4′
4′
24′
120
121
122
123
124
125
126
127
128
129
130
131
PROP. PROFILE GRADE
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1,046.92
1,047.20
1,047.45
1,047.66
1,047.83
1,047.98
1,048.09
1,048.17
1,048.21
1,048.23
1,048.20
SSD = 709′
ELEV = 1,049.15′
P.V.I. STA 130+50.00
K = 198
400.00′ VC
P.V.C. STA. 128+50.00
ELEV. = 1,046.27
+1.44 %
-0.68 %
+1.44 %
PROPOSED PROFILE
EXISTING GROUND
1060
1050
1040
1030
1020
1010
1000
EXIST. GROUND
1,031.40
1,032.12
1,032.56
1,033.31
1,033.61
1,034.22
1,034.58
1,034.87
1,035.38
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1,037.96
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1,042.93
1,043.76
1,044.58
1,045.30
1,045.86
1,045.09
1,044.70
1,045.07
119+00
120+00
121+00
122+00
123+00
124+00
125+00
126+00
127+00
128+00
129+00
130+00
131+00

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED AVP

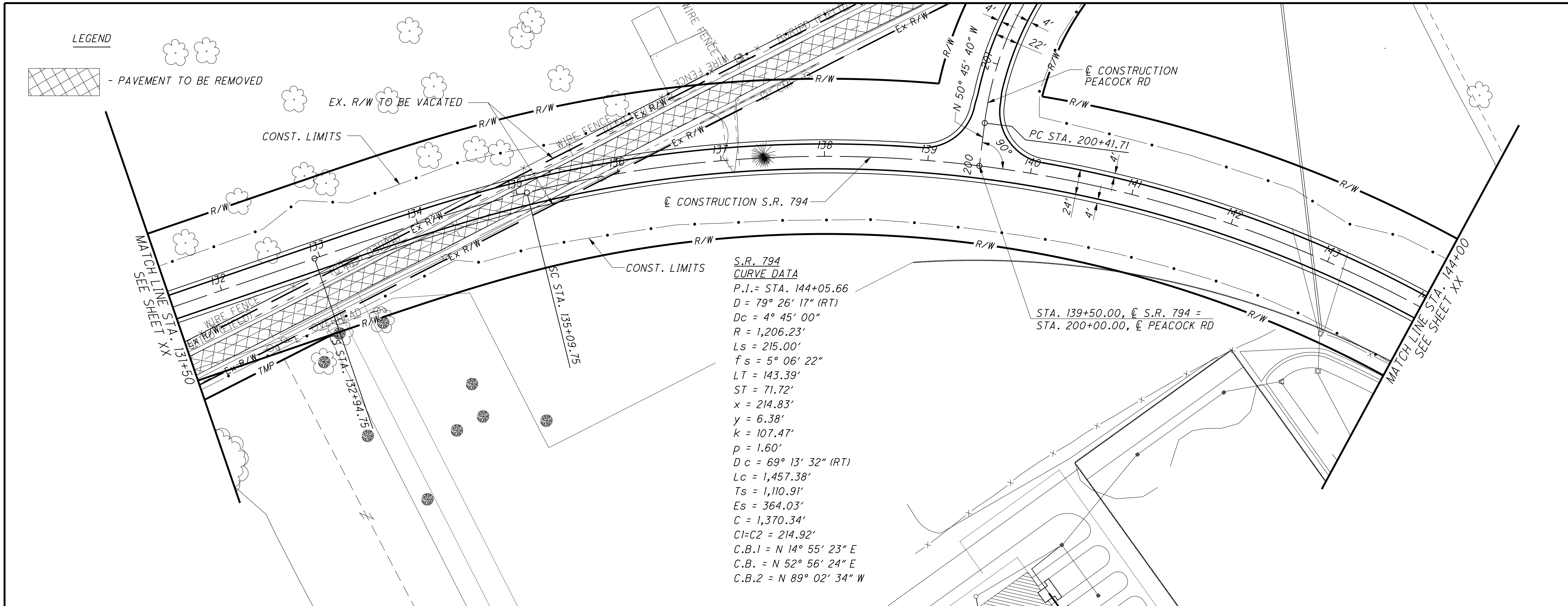
CHECKED CSR

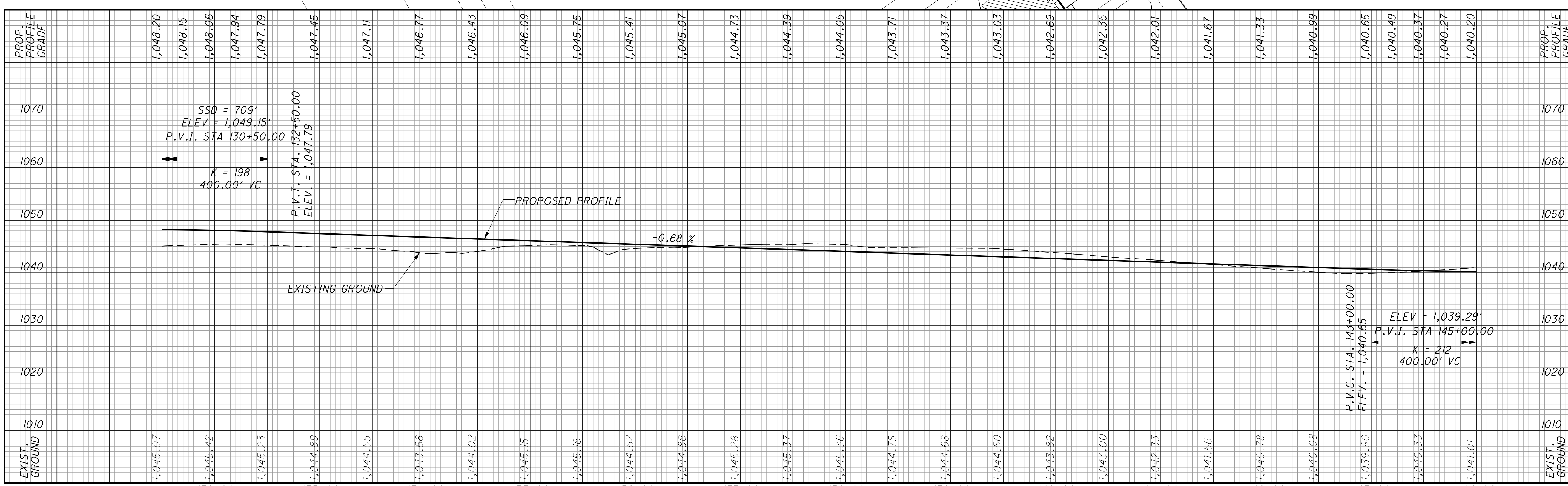
PLAN AND PRFOFILE

STA. 119+00.00 TO STA. 131+50.00

CLA-794-0.60

10 / 90


LEGEND
- PAVEMENT TO BE REMOVED
EX. R/W TO BE VACATED
CONST. LIMITS
R/W
Ex R/W
WIRE FENCE
BURIED (FIELD)
OVERHEAD
TMP
12" CMP
℄ CONSTRUCTION S.R. 794
℄ CONSTRUCTION PEACOCK RD
N 50° 45' 40" W
PC STA. 200+41.71
90°
4'
22'
24'
SC STA. 135+09.75
SS STA. 132+94.75
MATCH LINE STA. 131+50 SEE SHEET XX
MATCH LINE STA. 144+00 SEE SHEET XX
STA. 139+50.00, ℄ S.R. 794 = STA. 200+00.00, ℄ PEACOCK RD
132
133
134
135
136
137
138
139
140
141
142
143
200
201
S.R. 794
CURVE DATA
P.I.= STA. 144+05.66
D = 79° 26' 17" (RT)
Dc = 4° 45' 00"
R = 1,206.23'
Ls = 215.00'
f s = 5° 06' 22"
LT = 143.39'
ST = 71.72'
x = 214.83'
y = 6.38'
k = 107.47'
p = 1.60'
D c = 69° 13' 32" (RT)
Lc = 1,457.38'
Ts = 1,110.91'
Es = 364.03'
C = 1,370.34'
C1=C2 = 214.92'
C.B.1 = N 14° 55' 23" E
C.B. = N 52° 56' 24" E
C.B.2 = N 89° 02' 34" W


PROP. PROFILE GRADE
1,048.20
1,048.15
1,048.06
1,047.94
1,047.79
1,047.45
1,047.11
1,046.77
1,046.43
1,046.09
1,045.75
1,045.41
1,045.07
1,044.73
1,044.39
1,044.05
1,043.71
1,043.37
1,043.03
1,042.69
1,042.35
1,042.01
1,041.67
1,041.33
1,040.99
1,040.65
1,040.49
1,040.37
1,040.27
1,040.20
1070
1060
1050
1040
1030
1020
1010
SSD = 709'
ELEV = 1,049.15'
P.V.I. STA 130+50.00
K = 198
400.00' VC
P.V.T. STA. 132+50.00
ELEV. = 1,047.79
PROPOSED PROFILE
-0.68 %
EXISTING GROUND
P.V.C. STA. 143+00.00
ELEV. = 1,040.65
ELEV = 1,039.29'
P.V.I. STA 145+00.00
K = 212
400.00' VC
EXIST. GROUND
1,045.07
1,045.42
1,045.23
1,044.89
1,044.55
1,043.68
1,044.02
1,045.15
1,045.16
1,044.62
1,044.86
1,045.28
1,045.37
1,045.36
1,044.75
1,044.68
1,044.50
1,043.82
1,043.00
1,042.33
1,041.56
1,040.78
1,040.08
1,039.90
1,040.33
1,041.01
132+00
133+00
134+00
135+00
136+00
137+00
138+00
139+00
140+00
141+00
142+00
143+00
144+00

HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

CALCULATED AVP

CHECKED CSR

PLAN AND PROFILE
STA. 131+50.00 TO 144+00.00

CLA-794-0.60

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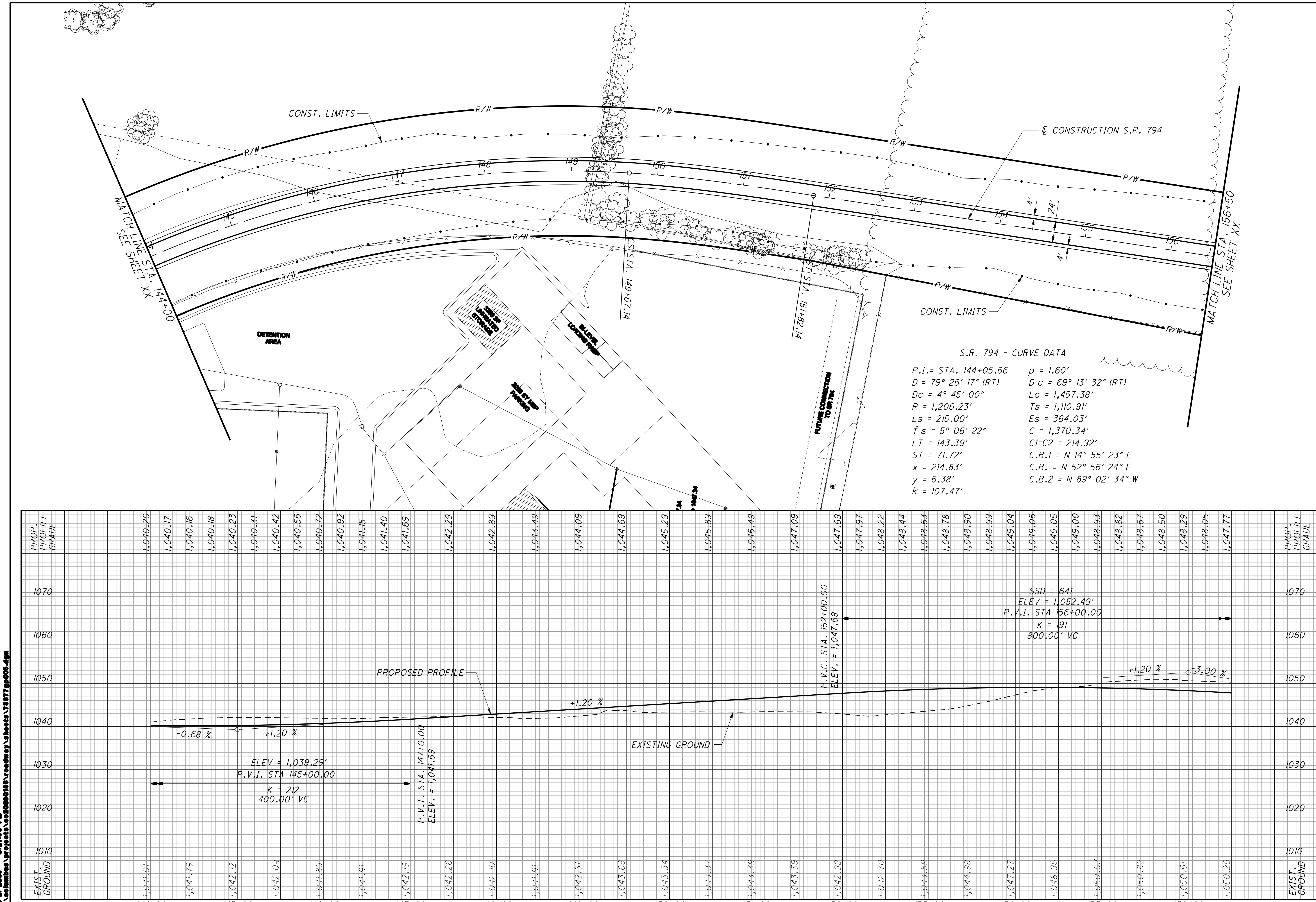
Attachment B-3


CONST. LIMITS
R/W
℄ CONSTRUCTION S.R. 794
MATCH LINE STA. 144+00
SEE SHEET XX
MATCH LINE STA. 156+50
SEE SHEET XX
145
146
147
148
149
150
151
152
153
154
155
156
4'
24'
4'
CS STA. 149+67.14
ST STA. 151+82.14
DETENTION AREA
3288 SF UNHEATED STORAGE
BI-LEVEL LOADING RAMP
2298 SY MEP PARKING
FUTURE CONNECTION TO SR 794
S.R. 794 - CURVE DATA
P.I.= STA. 144+05.66
D = 79° 26' 17" (RT)
Dc = 4° 45' 00"
R = 1,206.23'
Ls = 215.00'
f s = 5° 06' 22"
LT = 143.39'
ST = 71.72'
x = 214.83'
y = 6.38'
k = 107.47'
p = 1.60'
D c = 69° 13' 32" (RT)
Lc = 1,457.38'
Ts = 1,110.91'
Es = 364.03'
C = 1,370.34'
C1=C2 = 214.92'
C.B.1 = N 14° 55' 23" E
C.B. = N 52° 56' 24" E
C.B.2 = N 89° 02' 34" W
PROP. PROFILE GRADE
1,040.20
1,040.17
1,040.16
1,040.18
1,040.23
1,040.31
1,040.42
1,040.56
1,040.72
1,040.92
1,041.15
1,041.40
1,041.69
1,042.29
1,042.89
1,043.49
1,044.09
1,044.69
1,045.29
1,045.89
1,046.49
1,047.09
1,047.69
1,047.97
1,048.22
1,048.44
1,048.63
1,048.78
1,048.90
1,048.99
1,049.04
1,049.06
1,049.05
1,049.00
1,048.93
1,048.82
1,048.67
1,048.50
1,048.29
1,048.05
1,047.77
1070
1060
1050
1040
1030
1020
1010
SSD = 641
ELEV = 1,052.49'
P.V.I. STA 156+00.00
K = 191
800.00' VC
P.V.C. STA. 152+00.00
ELEV. = 1,047.69
PROPOSED PROFILE
+1.20 %
-0.68 %
+1.20 %
+1.20 %
-3.00 %
EXISTING GROUND
ELEV = 1,039.29'
P.V.I. STA 145+00.00
K = 212
400.00' VC
P.V.T. STA. 147+0.00
ELEV. = 1,041.69
EXIST. GROUND
1,041.01
1,041.79
1,042.12
1,042.04
1,041.89
1,041.91
1,042.19
1,042.26
1,042.10
1,041.91
1,042.51
1,043.68
1,043.34
1,043.37
1,043.39
1,043.39
1,042.92
1,042.70
1,043.59
1,044.98
1,047.27
1,048.96
1,050.03
1,050.82
1,050.61
1,050.26
144+00
145+00
146+00
147+00
148+00
149+00
150+00
151+00
152+00
153+00
154+00
155+00
156+00
HORIZONTAL SCALE IN FEET
0 25 50 100

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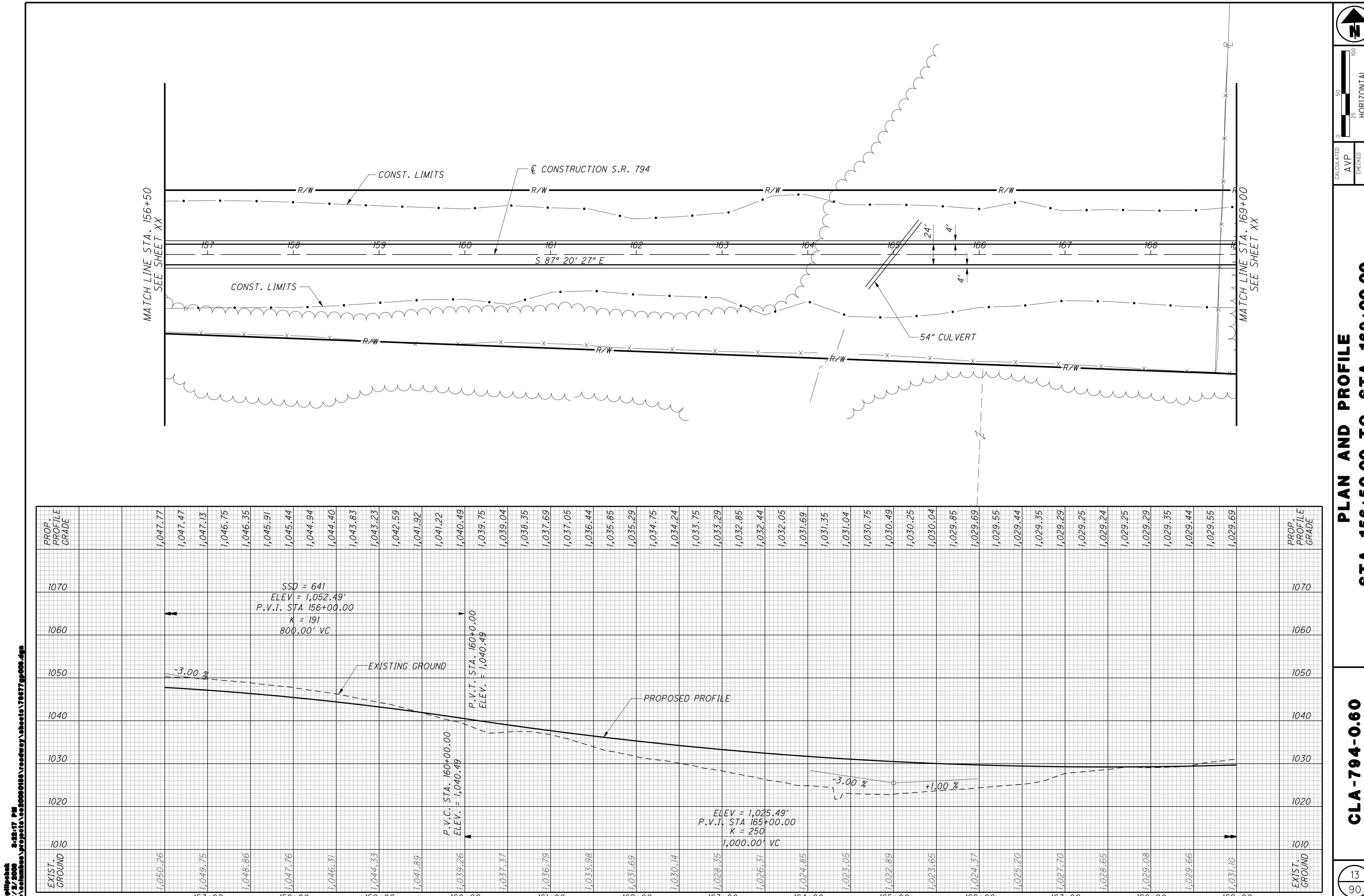
CALCULATED AVP
CHECKED CSR

PLAN AND PROFILE
STA. 144+00.00 TO STA. 156+50.00

CLA-794-0.60

12 / 90



CONST. LIMITS
℄ CONSTRUCTION S.R. 794
R/W
157
158
159
160
161
162
163
164
165
166
167
168
S 87° 20′ 27″ E
24′
4′
4′
CONST. LIMITS
54″ CULVERT
MATCH LINE STA. 156+50
SEE SHEET XX
MATCH LINE STA. 169+00
SEE SHEET XX
PROP. PROFILE GRADE
1,047.77 1,047.47 1,047.13 1,046.75 1,046.35 1,045.91 1,045.44 1,044.94 1,044.40 1,043.83 1,043.23 1,042.59 1,041.92 1,041.22 1,040.49 1,039.75 1,039.04 1,038.35 1,037.69 1,037.05 1,036.44 1,035.85 1,035.29 1,034.75 1,034.24 1,033.75 1,033.29 1,032.85 1,032.44 1,032.05 1,031.69 1,031.35 1,031.04 1,030.75 1,030.49 1,030.25 1,030.04 1,029.85 1,029.69 1,029.55 1,029.44 1,029.35 1,029.29 1,029.25 1,029.24 1,029.25 1,029.29 1,029.35 1,029.44 1,029.55 1,029.69
1070
1060
1050
1040
1030
1020
1010
SSD = 641
ELEV = 1,052.49′
P.V.I. STA 156+00.00
K = 191
800.00′ VC
-3.00 %
EXISTING GROUND
P.V.T. STA. 160+0.00
ELEV. = 1,040.49
PROPOSED PROFILE
P.V.C. STA. 160+00.00
ELEV. = 1,040.49
-3.00 %
+1.00 %
ELEV = 1,025.49′
P.V.I. STA 165+00.00
K = 250
1,000.00′ VC
EXIST. GROUND
1,050.26 1,049.75 1,048.86 1,047.76 1,046.31 1,044.33 1,041.89 1,039.26 1,037.37 1,036.79 1,033.98 1,031.69 1,030.14 1,028.35 1,026.31 1,024.85 1,023.05 1,022.89 1,023.65 1,024.37 1,025.20 1,027.70 1,028.65 1,029.08 1,029.66 1,031.10
157+00
158+00
159+00
160+00
161+00
162+00
163+00
164+00
165+00
166+00
167+00
168+00
169+00
N
0 25 50 100
HORIZONTAL SCALE IN FEET
CALCULATED AVP
CHECKED CSR
PLAN AND PROFILE
STA. 156+50.00 TO STA. 169+00.00
CLA-794-0.60
13
90
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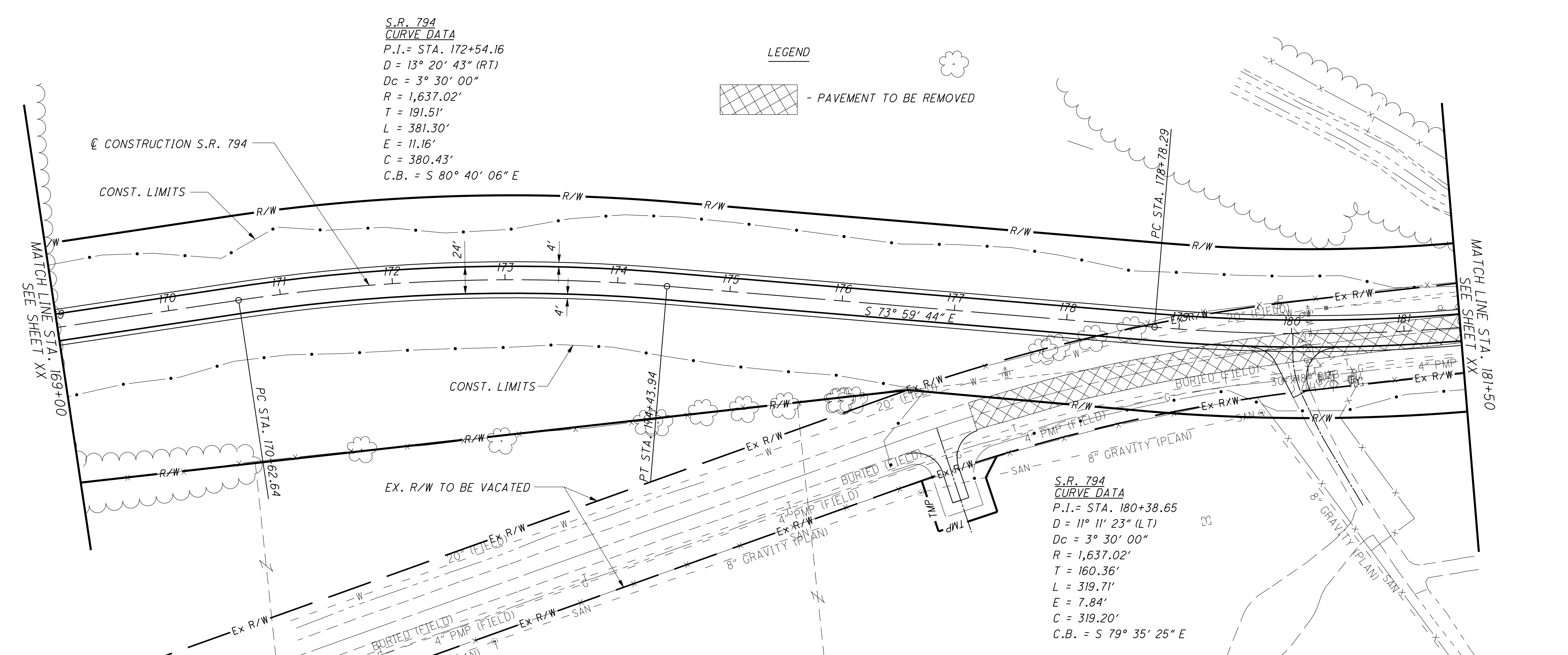
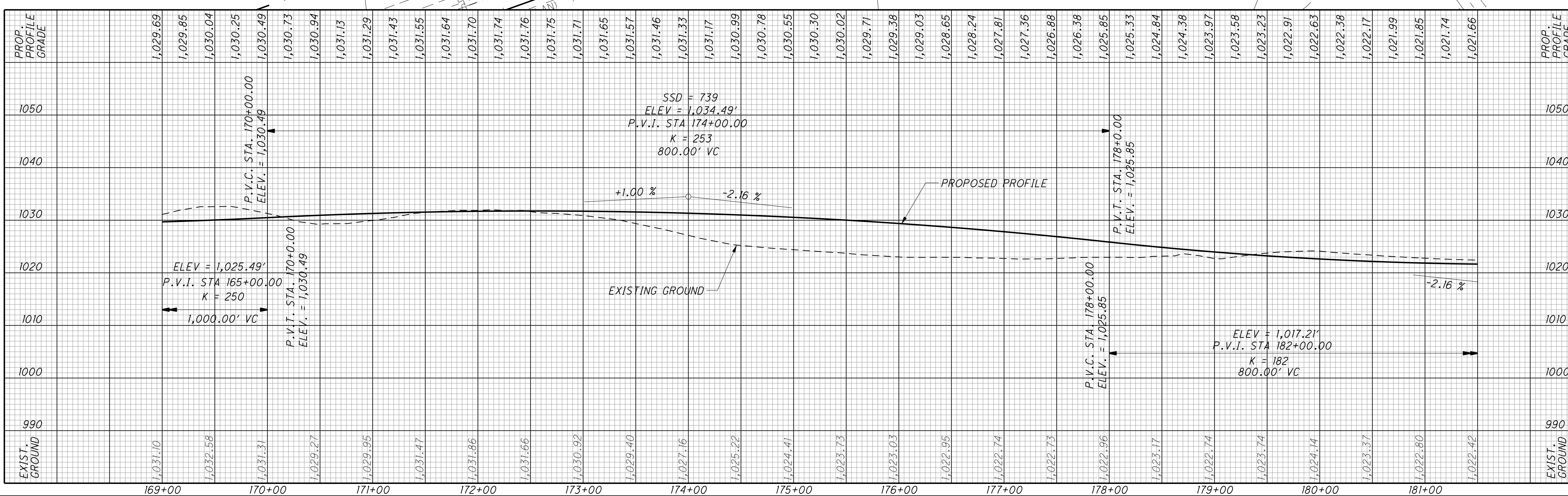

S.R. 794
CURVE DATA
P.I.= STA. 172+54.16
D = 13° 20' 43" (RT)
Dc = 3° 30' 00"
R = 1,637.02'
T = 191.51'
L = 381.30'
E = 11.16'
C = 380.43'
C.B. = S 80° 40' 06" E
LEGEND
- PAVEMENT TO BE REMOVED
℄ CONSTRUCTION S.R. 794
CONST. LIMITS
R/W
24'
4'
170
171
172
173
174
175
176
177
178
179
180
181
S 73° 59' 44" E
PC STA. 170+62.64
PT STA. 174+43.94
PC STA. 178+78.29
MATCH LINE STA. 169+00 SEE SHEET XX
MATCH LINE STA. 181+50 SEE SHEET XX
EX. R/W TO BE VACATED
Ex R/W
20" (FIELD)
BURIED (FIELD)
4" PMP (FIELD)
8" GRAVITY (PLAN)
SAN
TMP
S.R. 794
CURVE DATA
P.I.= STA. 180+38.65
D = 11° 11' 23" (LT)
Dc = 3° 30' 00"
R = 1,637.02'
T = 160.36'
L = 319.71'
E = 7.84'
C = 319.20'
C.B. = S 79° 35' 25" E


PROP. PROFILE GRADE
1,029.69
1,029.85
1,030.04
1,030.25
1,030.49
1,030.73
1,030.94
1,031.13
1,031.29
1,031.43
1,031.55
1,031.64
1,031.70
1,031.74
1,031.76
1,031.75
1,031.71
1,031.65
1,031.57
1,031.46
1,031.33
1,031.17
1,030.99
1,030.78
1,030.55
1,030.30
1,030.02
1,029.71
1,029.38
1,029.03
1,028.65
1,028.24
1,027.81
1,027.36
1,026.88
1,026.38
1,025.85
1,025.33
1,024.84
1,024.38
1,023.97
1,023.58
1,023.23
1,022.91
1,022.63
1,022.38
1,022.17
1,021.99
1,021.85
1,021.74
1,021.66
1050
1040
1030
1020
1010
1000
990
P.V.C. STA. 170+00.00
ELEV. = 1,030.49
SSD = 739
ELEV = 1,034.49'
P.V.I. STA 174+00.00
K = 253
800.00' VC
P.V.T. STA. 178+0.00
ELEV. = 1,025.85
+1.00 %
-2.16 %
PROPOSED PROFILE
ELEV = 1,025.49'
P.V.I. STA 165+00.00
K = 250
1,000.00' VC
P.V.T. STA. 170+0.00
ELEV. = 1,030.49
EXISTING GROUND
P.V.C. STA. 178+00.00
ELEV. = 1,025.85
ELEV = 1,017.21'
P.V.I. STA 182+00.00
K = 182
800.00' VC
-2.16 %
EXIST. GROUND
1,031.10
1,032.58
1,031.31
1,029.27
1,029.95
1,031.47
1,031.86
1,031.66
1,030.92
1,029.40
1,027.16
1,025.22
1,024.41
1,023.73
1,023.03
1,022.95
1,022.74
1,022.73
1,022.96
1,023.17
1,022.74
1,023.74
1,024.14
1,023.37
1,022.80
1,022.42
169+00
170+00
171+00
172+00
173+00
174+00
175+00
176+00
177+00
178+00
179+00
180+00
181+00

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED AVP
CHECKED CSR

PLAN AND PROFILE
STA. 169+00.00 TO STA. 181+50.00

CLA-794-0.60

14/90

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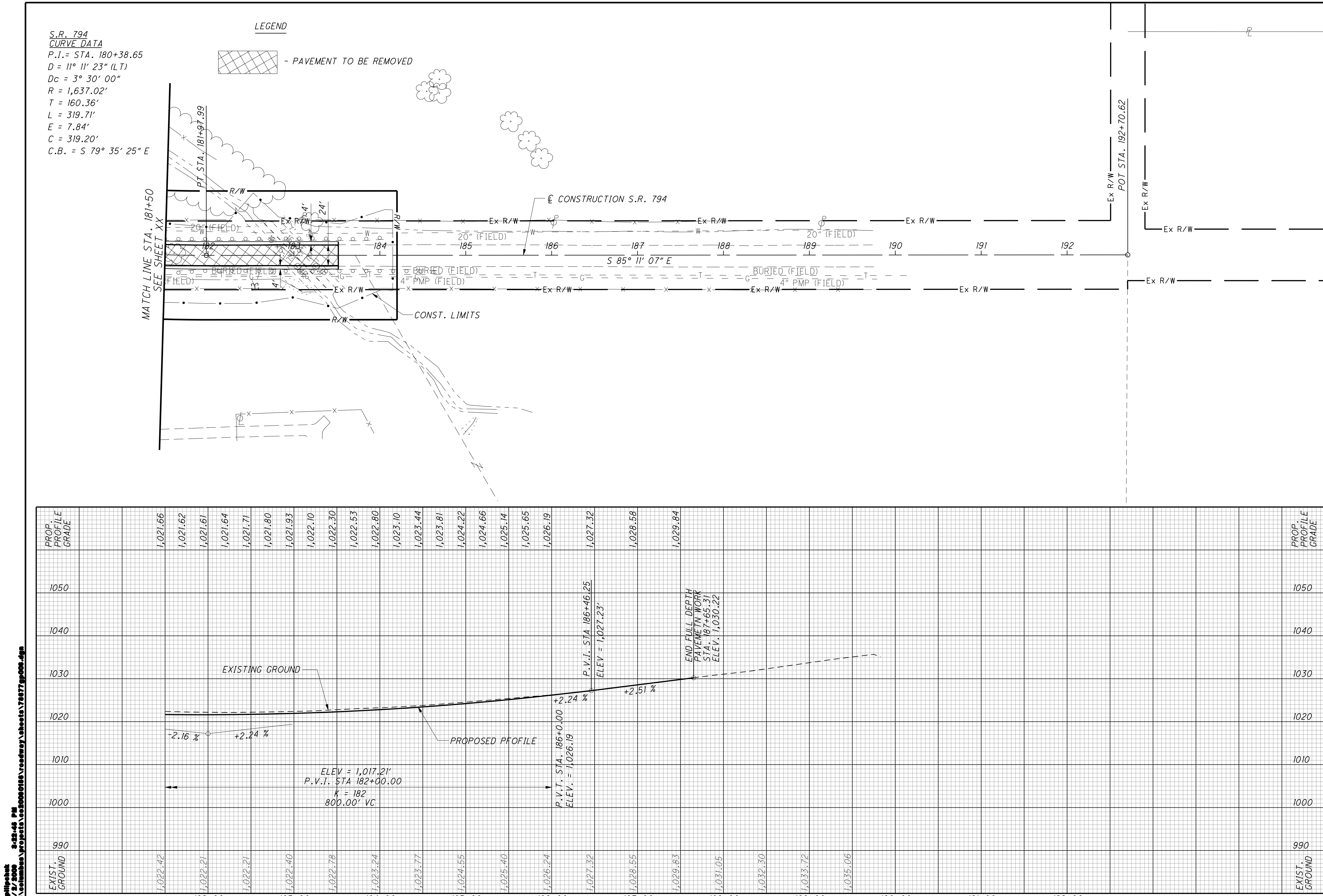
Attachment B-6


S.R. 794
CURVE DATA
P.I.= STA. 180+38.65
D = 11° 11′ 23″ (LT)
Dc = 3° 30′ 00″
R = 1,637.02′
T = 160.36′
L = 319.71′
E = 7.84′
C = 319.20′
C.B. = S 79° 35′ 25″ E
LEGEND
- PAVEMENT TO BE REMOVED
MATCH LINE STA. 181+50
SEE SHEET XX
PT STA. 181+97.99
R/W
Ex R/W
20″ (FIELD)
BURIED (FIELD)
4″ PMP (FIELD)
24′
4′
CONST. LIMITS
℄ CONSTRUCTION S.R. 794
S 85° 11′ 07″ E
182
183
184
185
186
187
188
189
190
191
192
POT STA. 192+70.62
PROP. PROFILE GRADE
1,021.66
1,021.62
1,021.61
1,021.64
1,021.71
1,021.80
1,021.93
1,022.10
1,022.30
1,022.53
1,022.80
1,023.10
1,023.44
1,023.81
1,024.22
1,024.66
1,025.14
1,025.65
1,026.19
1,027.32
1,028.58
1,029.84
1050
1040
1030
1020
1010
1000
990
EXISTING GROUND
PROPOSED PFOFILE
-2.16 %
+2.24 %
+2.51 %
ELEV = 1,017.21′
P.V.I. STA 182+00.00
K = 182
800.00′ VC
P.V.T. STA. 186+0.00
ELEV. = 1,026.19
P.V.I. STA 186+46.25
ELEV = 1,027.23′
END FULL DEPTH
PAVEMETN WORK
STA. 187+65.31
ELEV. 1,030.22
EXIST. GROUND
1,022.42
1,022.21
1,022.21
1,022.40
1,022.78
1,023.24
1,023.77
1,024.55
1,025.40
1,026.24
1,027.32
1,028.55
1,029.83
1,031.05
1,032.30
1,033.72
1,035.06
182+00
183+00
184+00
185+00
186+00
187+00
188+00
189+00
190+00
191+00
192+00
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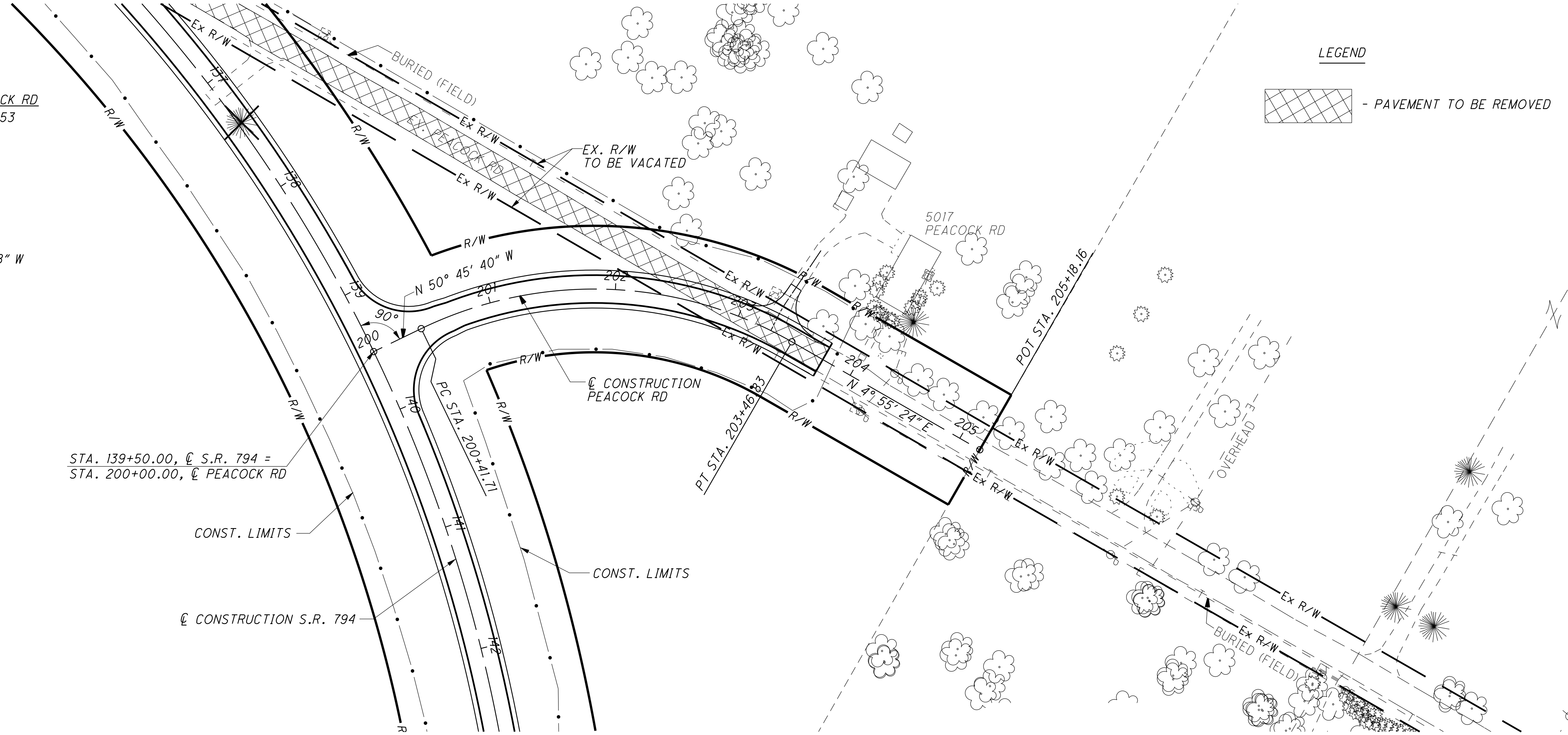
HORIZONTAL SCALE IN FEET
0 25 50 100

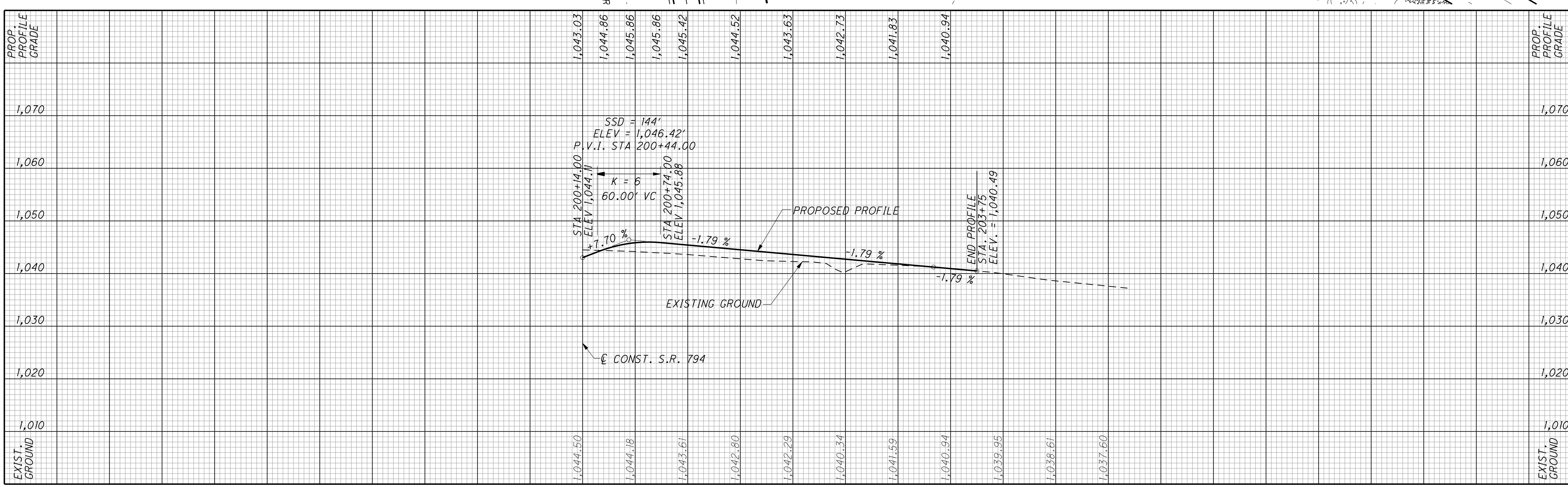
CALCULATED AVP
CHECKED CSR

PLAN AND PROFILE
STA. 181+50.00 TO STA. 190+00.00

CLA-794-0.60

<u>CURVE DATA PEACOCK RD</u>
P.I.= Sta. 202+07.53
D = 55° 41′ 04″ (RT)
Dc = 18° 15′ 00″
R = 313.95′
T = 165.82′
L = 305.12′
E = 41.10′
C = 293.25′
C.B. = N 22° 55′ 08″ W


LEGEND
- PAVEMENT TO BE REMOVED
BURIED (FIELD)
EX. PEACOCK RD
Ex R/W
EX. R/W
TO BE VACATED
R/W
N 50° 45′ 40″ W
90°
200
201
202
203
204
205
137
138
139
140
141
142
N 4° 55′ 24″ E
5017
PEACOCK RD
POT STA. 205+18.16
PT STA. 203+46.83
PC STA. 200+41.71
℄ CONSTRUCTION
PEACOCK RD
STA. 139+50.00, ℄ S.R. 794 =
STA. 200+00.00, ℄ PEACOCK RD
CONST. LIMITS
CONST. LIMITS
℄ CONSTRUCTION S.R. 794
OVERHEAD
BURIED (FIELD)


PROP. PROFILE GRADE
1,043.03
1,044.86
1,045.86
1,045.86
1,045.42
1,044.52
1,043.63
1,042.73
1,041.83
1,040.94
1,070
1,060
1,050
1,040
1,030
1,020
1,010
SSD = 144′
ELEV = 1,046.42′
P.V.I. STA 200+44.00
STA 200+14.00
ELEV 1,044.11
K = 6
60.00′ VC
STA 200+74.00
ELEV 1,045.88
+7.70 %
-1.79 %
-1.79 %
-1.79 %
PROPOSED PROFILE
END PROFILE
STA. 203+75
ELEV. = 1,040.49
EXISTING GROUND
℄ CONST. S.R. 794
EXIST. GROUND
1,044.50
1,044.18
1,043.61
1,042.80
1,042.29
1,040.34
1,041.59
1,040.94
1,039.95
1,038.61
1,037.60

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED AVP
CHECKED CSR

PLAN AND PROFILE PEACOCK ROAD

CLA-794-0.60

80
90

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CURVE DATA AIRPORT DR
P.I.= Sta. 302+49.66
D = 73° 11′ 27″ (LT)
Dc = 18° 15′ 00″
R = 313.95′
T = 233.12′
L = 401.05′
E = 77.09′
C = 374.33′
C.B. = S 76° 31′ 20″ E

CURVE DATA AIRPORT DROP LN
P.I.= Sta. 11+48.44
D = 94° 50′ 05″ (RT)
Dc = 42° 00′ 00″
R = 136.42′
T = 148.44′
L = 225.80′
E = 65.19′
C = 200.89′
C.B. = S 42° 30′ 45″ E

℄ CONSTRUCTION S.R. 794

STA. 118+50.00, ℄ S.R. 794 =
STA. 300+00.00, ℄ AIRPORT DR

PC STA. 300+16.54
PT STA. 304+17.38
POT STA. 306+13.38
PC STA. 10+00.00
PT STA. 12+25.80
POT STA. 12+55.80

CONST. LIMITS
℄ CONST. AIRPORT DR
℄ AIRPORT DROP LANE
EX. PEACOCK RD
EX. R/W TO BE VACATED
6" FORCE MAIN (FIELD)
8" GRAVITY (PLAN)
OVERHEAD
BURIED (FIELD)
4" PMP (FIELD)
18" (FIELD)
20" (FIELD)
7" (FIELD)
Ex R/W
Ex U
TMP
SAN
N 66° 52′ 56″ E
S 66° 52′ 56″ W
N 18° 54′ 18″ W

LEGEND
- PAVEMENT TO BE REMOVED

SSD = 140′
ELEV = 1,033.79′
P.V.I. STA 300+24.00
K = 2
20.00′ VC
STA 300+14.00 ELEV 1,032.99
STA 300+34.00 ELEV 1,033.76
+0.00 %
-0.31 %
-0.31 %
-0.31 %
+0.85 %
+0.85 %
PROPOSED PROFILE
END PROFILE STA 304+30 ELEV. = 1,034.39
EXISTING GROUND
℄ CONST. S.R. 794
STA 301+95.00 ELEV 1,033.27
STA 303+65.00 ELEV 1,033.67
ELEV = 1,033.04′
P.V.I. STA 302+70.00
K = 130
150.00′ VC

EDGE OF PAVEMENT OF AIRPORT DRIVE
ELEV = 1,034.55′
P.V.I. STA 10+60.00
SSD = 553′
K = 47
100.00′ VC
STA 10+10.00 ELEV 1,034.13
STA 11+10.00 ELEV 1,033.91
STA 11+90.00 ELEV 1,033.59
+0.85 %
-1.29 %
+0.50 %
-0.02 %
PROPOSED PROFILE
END PROFILE STA 12+25.80 ELEV. = 1,033.72
EXISTING GROUND
ELEV = 1,033.39′
P.V.I. STA 11+50.00
K = 45
80.00′ VC

PROP. PROFILE GRADE
EXIST. GROUND
1,031.87 1,033.71 1,033.56 1,033.40 1,033.25 1,033.21 1,033.37 1,033.71 1,034.14
1,034.04 1,034.30 1,034.03 1,033.57 1,033.64
1,031.60 1,032.60 1,032.72 1,032.95 1,032.91 1,032.34 1,033.18 1,033.70 1,034.15 1,034.58 1,034.92
1,033.21 1,033.25 1,032.58 1,031.93 1,033.51 1,033.60
1,040 1,030 1,020 1,010 1,000
300+00 301+00 302+00 303+00 304+00 305+00 306+00 10+00 11+00 12+00

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED AVP
CHECKED CSR

PLAN AND PROFILE AIRPORT DR AND DROP LN

CLA-794-0.60

81
90

epilipchak
7/2/2020 8:33:00 PM
I:\columbus\projects\ce2020015\roadway\sheets\Y86778P018.dgn

Attachment B-9

SR 794 Sub Area Study - Existing Conditions

CLARK COUNTY-SPRINGFIELD
TRANSPORTATION COORDINATING COMMITTEE

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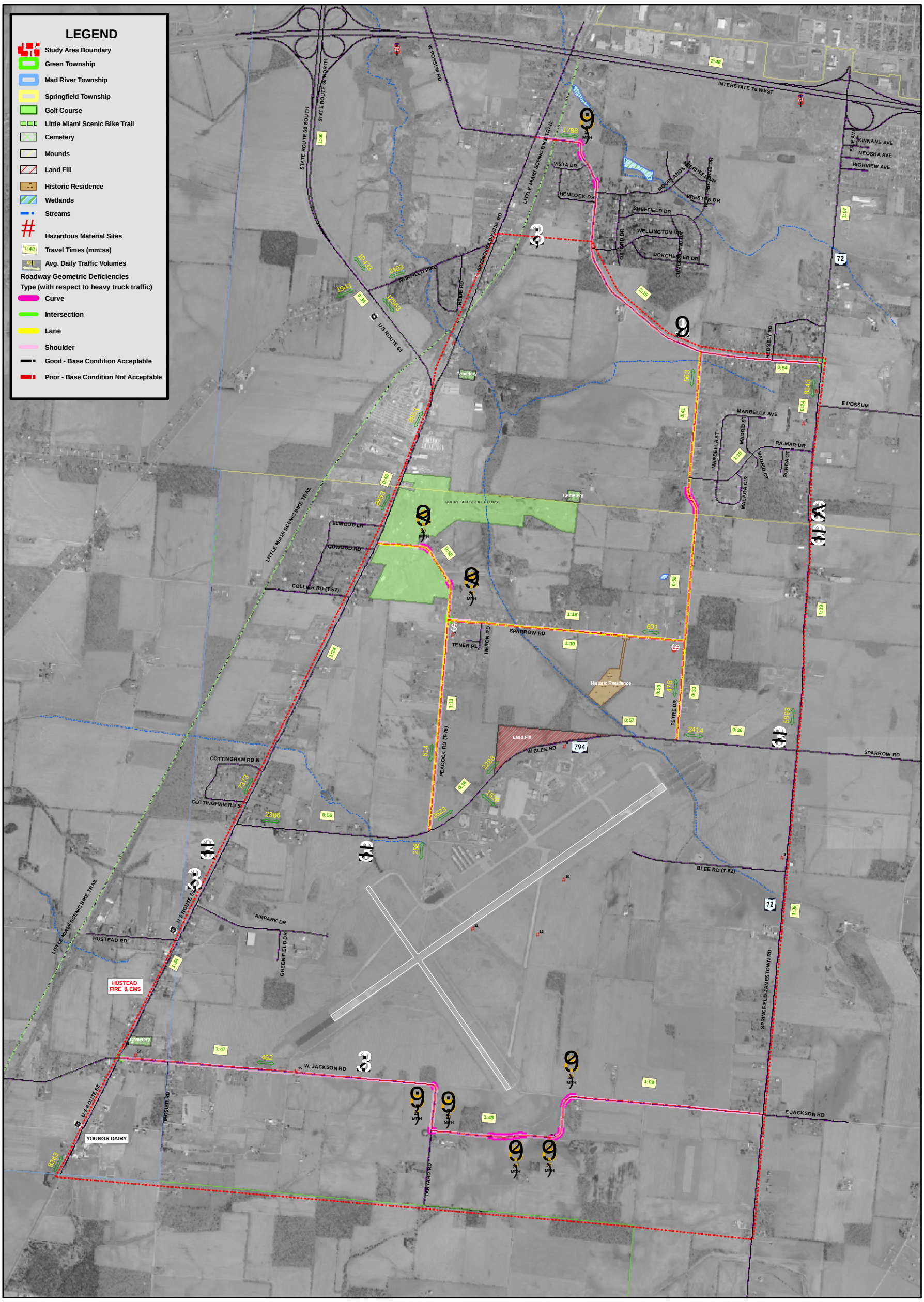


Figure 1: Existing Conditions

3.0 RED FLAG SUMMARY

At this stage in the planning process a search of existing records was completed, initial site visits were performed, and general observations were documented including red flags. Red flags, including environmental, right of way, utility and engineering issues were locations of concern within the study area. Red flags did not necessarily identify locations that must be avoided; rather, red flags identified locations that may entail additional study coordination, creative management or design approaches, or increased right-of-way or construction costs. Locations that must be avoided were considered "fatal flaws." A "fatal flaw" could involve significant, negative economic, environmental or cultural impact in an area. More in depth analysis requiring additional field work, such as soil borings or subsurface investigations, will be conducted during later steps of the project development process.

3.1 CULTURAL RESOURCE REPORT

Following is a summary of findings from the *Cultural Resources Red Flag Summary, SR 794 Sub-Area Study in Springfield and Green Townships, Clark County, Ohio* completed by ASC Group, Inc. in July 2005. A copy of the full report is found in Appendix A.

The Marquart-Mercer Farm (CLA-1-9) was the only property in the study area currently listed on the National Register of Historic Places (NRHP). Conceptual alternatives should avoid this property so that no need arises for a Phase II History/Architecture survey or a Section 4(f) evaluation.

There were numerous pre-1955 buildings in the study area. Since pre-1955 properties are subject to Section 106 requirements, a Phase I History/Architecture survey is necessary to determine whether NRHP eligible properties exist within the preferred alternative.

The following four cemeteries existing within the study area should be avoided:

- Emery Chapel Cemetery is along US 68, south of Fairfield Pike and north of W. Sparrow Road;
- The Old Emery Chapel Cemetery is along US 68 north of SR 794 near W. Sparrow Road;
- The Jackson-Hustead Cemetery is at the northeast corner of US 68 and Jackson Road; and
- The Kelly-Obenchain Cemetery is on the east side of Petre Road north of Sparrow Road.

No archaeological sites recorded on Ohio Archaeological Inventory (OAI) forms existed within the study area. Mills' 1914 atlas did indicate two mound locations within the study area; but these mound locations are not verified. A Phase I Archaeological survey is necessary to confirm the presence or absence of NRHP eligible archaeological sites within the preferred alternative.

3.2 Ecological Resources Report

Following is a summary of findings from the *Ecological Resources Red Flag Summary, SR 794 Sub-Area Study, Clark County, Ohio* completed by ASC Group, Inc. in July 2005. A copy of the full report is found in Appendix B.

There were no navigable waterways in the study area. Mill Creek, which runs from the northwest corner to the southeast corner of the study area, was the one perennial stream in the study area.

The 1991 Ohio Wetland Inventory Maps identified approximately 83 wetland/wetland complexes within the study area. Most of the wetland complexes were a mixture of shrub/scrub, shallow marsh, woods on hydric soils, and open water areas. The National Wetland Inventory (NWI) maps identified 19 wetlands in the study area. The NWI maps described 11 of the 19 as emergent wetlands, four of the 19 as forested wetlands, and four of the 19 as excavated open areas. During design, conceptual alternatives should avoid, or minimize impacts to, potential wetland areas identified in the literature review. Ecological surveys are necessary to verify the presence of wetlands within the preferred alternative.

The study area was within the known range of the following threatened or endangered species:

- The federally and state-endangered Indiana bat (*Myotis sodalist*);
- The federally endangered eastern prairie fringed orchid (*Platanthera leucophaea*); and
- The eastern massasauga (*Sistrurus catenatus catenatus*), a candidate species for federal listing.

In addition, the state-threatened upland sandpiper (*Bartramia longicauda*) was located within the study area at the Springfield-Beckley Municipal Airport. The known location of the upland sandpiper was bordered on the north by SR 794, on the east by Petre Road, on the south by Jackson Road, and on the west by Mosier Road and US 68. When developing conceptual alternatives, alternatives should avoid this area.

3.3 Geotech Report

The ODOT Office of Geotechnical Engineering specifically identifies six conditions as Geologic Hazards: landslides, rock falls, wetlands and peat, underground mines, surface mines and karst. Of these six conditions, wetlands and/or standing water require further consideration prior to the any potential project in this study area. Additionally, karst areas should be further investigated as a part of a subsurface investigation when the final project plan is available.

For a complete geotechnical analysis of the study area, see the June 2005 *Geotechnical/Pavement Red Flag Summary Report SR 794 Sub-Area Study, Clark County, Ohio* found in Appendix D.

3.4 HAZARDOUS MATERIALS

A search of available environmental records was conducted to research hazardous waste generators, hazardous emergency response incidents, underground storage tank incident reports, mines, and hazardous waste spills.

In June 2005, Environmental Data Resources Inc. (EDR) completed a *Regulatory Database Review* to determine potential hazardous risks in the study area. No National Priority List (NPL), Comprehensive Environmental Response, Compensation, and Liability Information (CERCLIS), or Resource Conservation and Recovery Act (RCRA) sites were within the study area. There were several Underground Storage Tanks (USTs) in the study area, including (but not limited to) three USTs at the Airport and four USTs at the OANG base. In addition, the Leaking Underground Storage Tank (LUST) database reported a leaking incident at the Airport. In total, ten sites were identified as potential areas to avoid. A complete copy of the *Regulatory Database Review* is found in Appendix C.

In addition, the City of Springfield (City) owned three tracts of land dedicated as landfill property within the study area. This is shown on Figure 1, SR 794 Sub-Area Study. The landfill operated from 1967-1969. Historically and currently, Tracts I and II were used for agricultural purposes. A 1994 Phase I Environmental Site Assessment (ESA) survey concluded tracts I and II void of potential environmental hazards.

City of Springfield landfill on the north side of SR 794 across from the Ohio Air National Guard Base

Tract III was 18.26 acres located on the north side of SR 794. Historically, the City used Tract III to dispose of residential and some commercial materials such as soil, wood chips, cement, asphalt, and gravel. Also, the municipal wastewater treatment plant used Tract III for the disposal of sludge. Recently, the northeast portion of Tract III was used to dispose of animal carcasses.

The 1994 Phase I ESA report recommended a Phase II ESA for Tract III. However, a Phase II is not necessary if the landfill parcel is avoided.

It is highly recommended that a Rule 13 Authorization be obtained for any alternatives immediately adjacent to Tract III. A Rule 13 Authorization is a pre-construction approval from

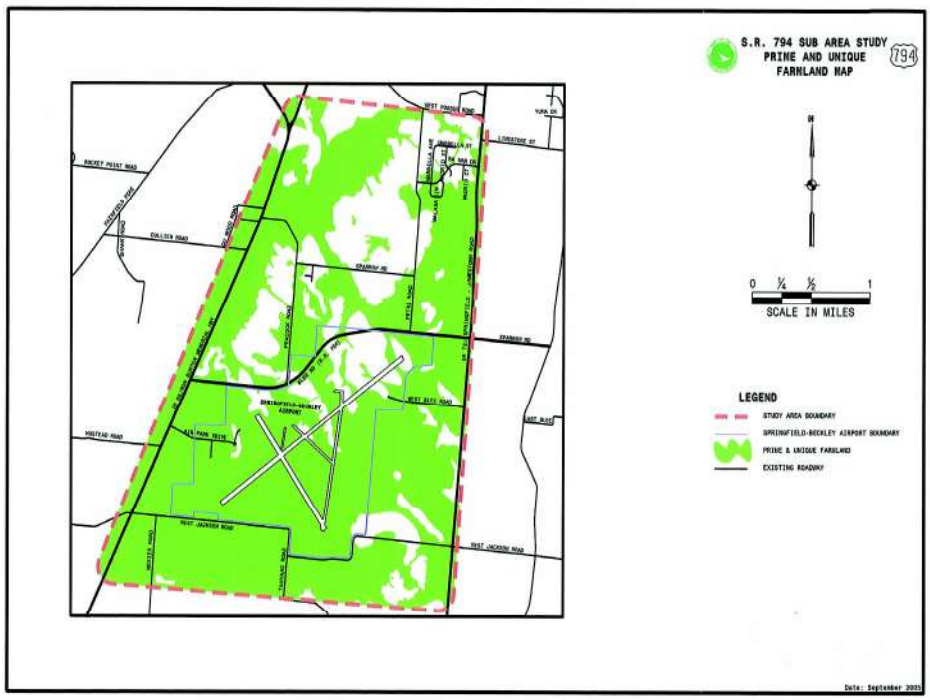
the Ohio Environmental Protection Agency (OEPA) Director. This approval acts as notice of the construction activities to the OEPA, health department, fire and emergency services, and others incase excavation uncovers any hazardous materials. This approval also prevents applicable fines and penalties if work proceeds unauthorized and encounters hazardous materials.

Compliance with the Ohio Revised Code Chapter 3734 is necessary to obtain a Rule 13 Authorization. The OEPA must receive information about the proposed project, such as, but not limited to:

- Mapping specifying the project location
- Verbal description of the project
- Details regarding the activities at the adjacent landfill
- Letters of acknowledgment from the affected property owners
- Letters of notice and certified mail receipts for various entities

3.5 FARMLANDS

The study area was rural and much of the land use was agricultural. The 1991 *Soil Survey of Clark County, Ohio* identified most of the soil in the study area as prime and unique farmland, as shown below.



1991 Soil Survey of Clark County

It is recommended that a Farmland Conversion Impact Rating form be completed, and coordinated as necessary with the US Department of Agriculture, for the recommended preferred alternative.

3.6 SUMMARY OF RED FLAGS

Currently, red flags within the SR 794 sub-area include:

- The City of Springfield landfill parcel along SR 794
- The state-threatened upland sandpiper known to nest at the Springfield-Beckley Municipal Airport
- The federally-endangered eastern prairie fringed orchid whose habitat may be present in the study area
- The eastern massasauga, a candidate species for federal listing, whose habitat may be present in the study area
- The numerous potential wetlands anticipated throughout the study area based on soil mapping and general observations of wetland plant species such as cattails
- Mill Creek
- The potential for historic properties based on the number of pre-1955 buildings in the study area and the need to conduct an archaeological survey within the preferred alternative
- The Marquart-Mercer Farm, along Sparrow Road, which is listed on the NRHP and thus is a Section 106 and Section 4(f) concern
- The Little Miami Bikeway which is a public recreation area and thus a Section 4(f) concern

See Figure 1 for locations of red flags within the study area.

4.0 PURPOSE AND NEED

The purpose and need for an improvement in this sub-area was to meet the force protection requirements of the Ohio Air National Guard (OANG) base while providing for a connection between US 68 and SR 72 that considered future development and did not adversely impact mobility and emergency response time.

The goals of the study, as adopted by study team and stakeholders, included providing a roadway system that:

- Met or exceeded military security standards;
- Had minimal impact to the surrounding community;
- Provided for adequate emergency and other public services;
- Met the purpose and need long into the future while accommodating future growth;
- Met the TCC's long range transportation plan, the OANG's base master plan, and the Springfield-Beckley Municipal Airport's master plan;
- Maximized land area; and
- Provided a safe and efficient local access system.

The purpose and need statement and related goals were the primary criteria used to identify reasonable alternative solutions, evaluate alternatives, and to select the preferred conceptual alternative.

4.1 MILITARY SECURITY STANDARDS

The Unified Facilities Criteria (UFC) 4-010-02 for antiterrorism and force protection (AT/FP) provides the minimum criteria for AT/FP developed by the Department of Defense (DOD) in October 2003, as a result of the events of September 11, 2001. The primary criteria to be considered include:

- Insure uncontrolled pavements are located at least 148 feet from primary gathering facilities (facilities where more than 50 people regularly gather);
- Insure uncontrolled pavements are located at least 82 feet from any inhabited building (facilities with more than 11 people); and
- Other criteria may include considerations for sighting new entry access and high speed approaches.

All military installations, including National Guard and Reserves, are required to make the appropriate changes to meet the criteria without exception. Figure 2 shows the Antiterrorism Construction Standards and Figure 3 shows the Antiterrorism Standoff Distances.

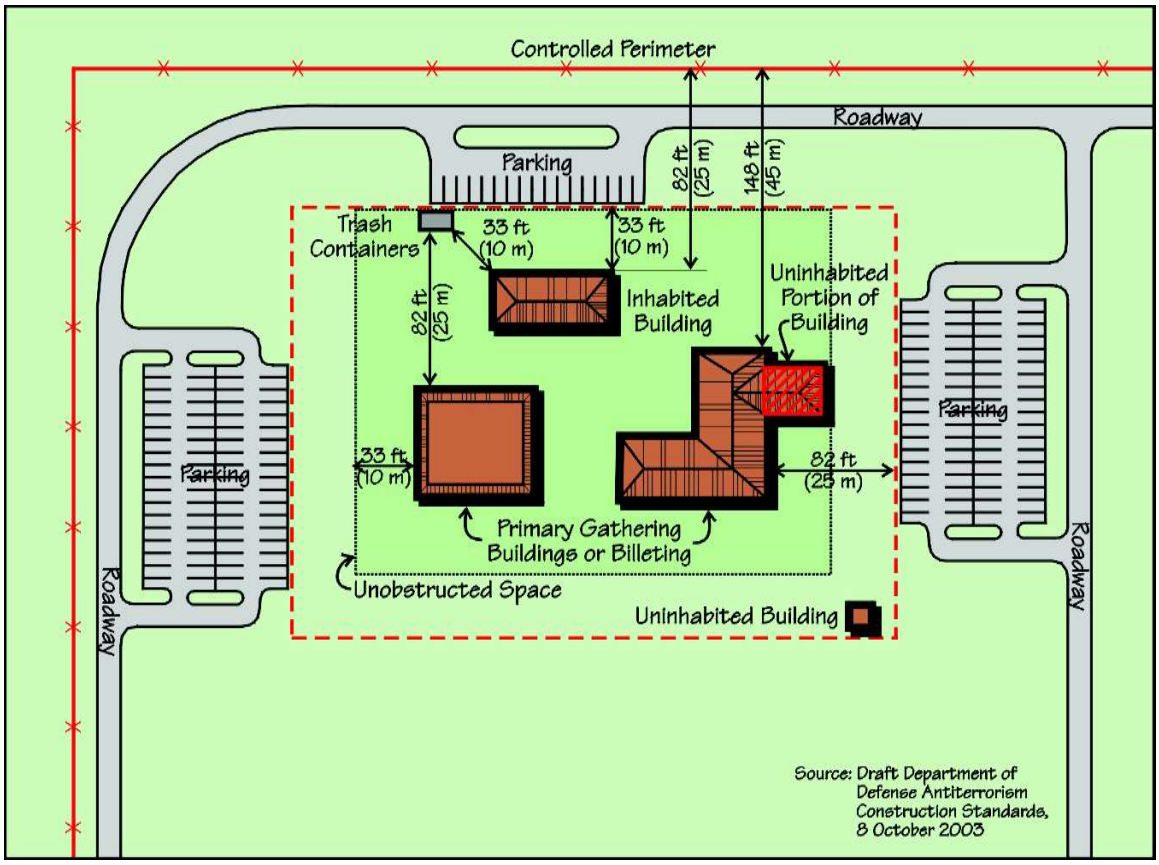


Figure 2. Antiterrorism Construction Standards

Figure 3. Antiterrorism Standoff Distances

Attachment D-3

ANTITERRORISM STANDOFF DISTANCES

Ohio Air National Guard
Springfield-Beckley Municipal Airport
Springfield, Ohio

LEGEND

- Building Standoffs
- Perimeter Standoff - Based on DoD Antiterrorism Standards. 10/8/2003
- Area of Possible Future Expansion

N

Graphic Scale in Feet

0 200 400 800

There are currently three buildings, known as 118, 147, and 150, at the OANG base that do not meet the criteria. The allowable distance from SR 794 is based on building occupancy and the higher the occupancy of the structure the further it needs to be from potential points of attack. Building standoff distance for buildings 118 and 147 fall within the roadway and for building 150, the distance is approximately 80 feet from roadway centerline. These buildings were constructed prior to the DOD adopting the criteria. Figure 3 shows the Antiterrorism Standoff Distances relative to SR 794. As Figure 3 shows, the buildings are vulnerable to attack and changes are necessary to protect the buildings. At a minimum, SR 794 will be closed between Sparrow and Peacock Roads to meet the criteria.

4.2 Future Growth and Long Range Plan

The OANG Base Master Plan, December 2003, showed that the OANG planned to develop the City of Springfield's property on the north side of SR 794 adjacent to its current entrance. In addition, the DOD's Base Realignment and Closure Committee (BRAC) announced that the Army Reserve and National Guard units will be building a new 40-acre complex on the City of Springfield's property north of the existing SR 794 and will relocate to this complex as part of the new base realignment. The BRAC announcement also stated:

- The OANG base will maintain a level of personnel near its current level;
- The F-16 aircrafts are leaving the base; and
- The communication group and communications squadron will remain at the base.

Therefore, the buildings currently not in compliance with the DOD standards are still needed. The 2005 BRAC report did not affect the force protection requirements for this base because the base will remain open and the affected structures that are in violation of the standards will still be in use.

The Clark County-Springfield TCC's 2030 Transportation Plan, completed June 2004, included the following anticipated projects within the study area: improvements for SR 794, improvements to the curves on Jackson Road south of the airport, and improvements to W. Possum Road from SR 72 to US 68.

4.3 Emergency Services

The area between US 68 to the west, SR 72 to the east, W. Possum Road to the north, and Jackson Road to the south does not currently have traffic mobility deficiencies. Based on available twenty-five year traffic projections, there is no indication of any mobility problems in the future. SR 794 currently provides a direct connection between US 68 and SR 72. Travel time is currently two minutes and 45 seconds from US 68 to SR 72. Emergency response time from the Hustead Fire and EMS station to the eastern part of Clark County would double if SR 794 closes and the vehicles would be forced to use Jackson Road or Sparrow Road as an alternative.

6.0 CONCEPTUAL ALTERNATIVES

6.1 DESCRIPTION OF CONCEPTUAL ALTERNATIVES

The alternatives developed addressed the purpose and need of the project. The number and range of alternatives selected was appropriate for the identified needs and goals of the study. Early in the planning process, the study team identified criteria for selecting alternatives for further development.

The no-build alternative established the base condition for the study. The no-build alternative meant only minor maintenance to SR 794 to keep the facility operational. However, due to non-compliance with the antiterrorism standards, if the no-build were selected as the preferred conceptual alternative, a portion of SR 794 between Peacock Road and Sparrow Road would be closed. The study then identified various alternatives to the no-build involving combinations of roadway closures and upgrades of existing facilities throughout the study area. In addition, the study considered re-enforcing or relocating OANG base buildings. These initial alternatives focusing on SR 794 and upgrades and closures of existing facilities are identified as Alternatives A, B, and C.

Alternative A involved relocating the OANG base buildings to meet the DOD standards. Currently, the dining hall is noncompliant with DOD standards, but the building's function is essential to the base and no existing base building can accommodate the dining hall.

Alternative B involved closing SR 794 between Sparrow and Peacock Roads and upgrading Peacock and Sparrow Roads to handle the additional traffic and heavy truck loads. This solution required some additional right of way to widen the shoulders and upgrade the roadway pavement base to meet the standards to handle heavy truck traffic.

Sparrow Road north of SR 794 looking north

Alternative C involved closing Peacock Road between SR 794 and Sparrow Road, and closing SR 794 at Sparrow Road. This solution required upgrading Sparrow Road between US 68 and SR 794 to handle the additional traffic and heavy truck loads. This required some additional right of way to widen the shoulders and upgrade the roadway pavement base to meet the standards to handle heavy trucks.

Sparrow Road at Peacock Road looking east

The additional alternatives focused on three areas within the study area:

- The Existing 794 and Sparrow Road Vicinity (Alternatives D and E);
- The Jackson Road Vicinity (Alternatives F) and
- The Possum Road Vicinity (Alternatives G).

The following table describes each alternative. Ultimately, the preferred conceptual alternative may include combinations of these alternatives.

Table 9: Conceptual Alternatives

Alternative		Description
Closures/ Upgrades	A	Relocate OANG Buildings to meet DOD standards
	B	Close SR 794 between Sparrow and Peacock, Upgrade Sparrow and Peacock Roads to accommodate additional traffic and truck loads.
	C	Close Peacock between SR 794 and Sparrow, Close SR 794 at Sparrow Road, Upgrade Sparrow Road, Cul-de-sac Peacock Road approximately 1,600 feet north of SR 794.
SR 794 Vicinity	D1	Realign SR 794 from Mill Creek to near Airport entrance.
	D2	Realign SR 794 from Mill Creek with long curves.
	D3	Realign SR 794 from Mill Creek to US 68 near Cottingham Road (north).
	D4	Realign SR 794 straight from Mill Creek to US 68.
	E	Close 794 and extend & upgrade Sparrow Road from US 68 to SR 72.
Jackson Road Vicinity	F1	Straighten curves and upgrade Jackson Road and realign the west end to go north of the homes on the north side of Jackson Road. The new road would intersect US 68 1300 feet north of the existing US 68 & Jackson Road Intersection.
	F2	Straighten curves and upgrade Jackson Road and realign the west end to go north of the homes on the north side of Jackson Road. The new road would intersect US 68 700 feet north of the existing US 68 & Jackson Road Intersection.
	F3	Jackson Road new alignment from US 68 to SR 72 south of existing Jackson Road

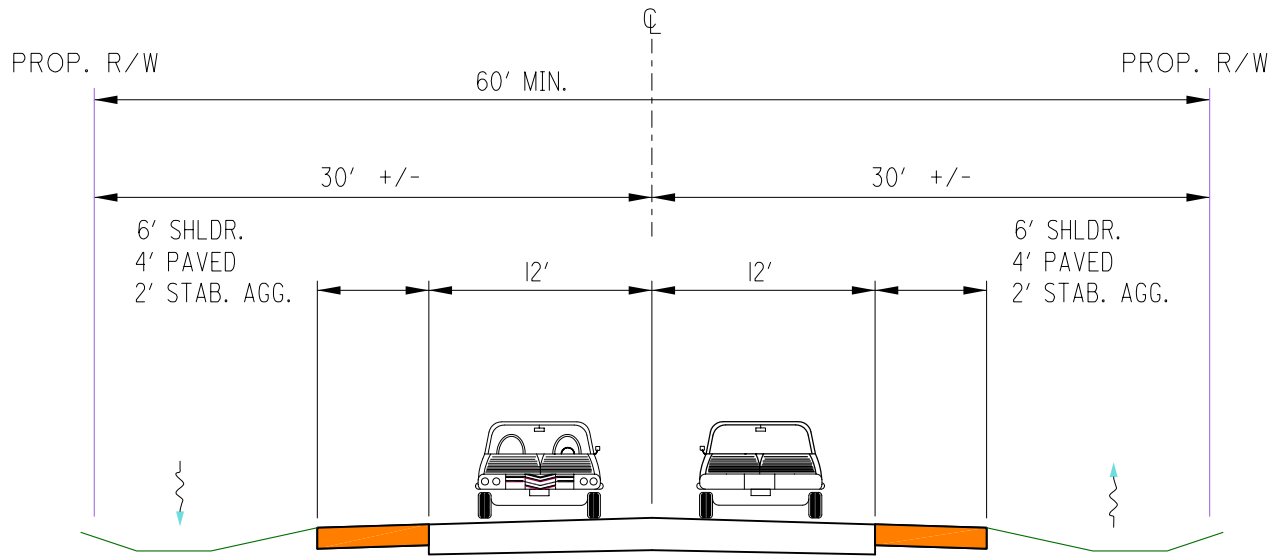
Alternative		Description
W. Possum Vicinity	G1	New Alignment for W. Possum Road connecting with Fairfield Pike.
	G2	New Alignment for W. Possum Road connecting with Springfield-Xenia Road.
	G3	New Alignment for W. Possum Road - connecting E. Possum Road at SR 72 with US 68 at US 68/Springfield-Xenia Road intersection.
	G4	New Alignment for W. Possum Road connecting E. Possum Road at SR 72 with US 68 south of Midwest Storage.
Combinations	H	Close SR 794; Any Jackson Road improvements & New W. Possum Road alignments.
	I	Any Jackson Road improvements & any SR 794 realignments.
	J	Any SR 794 realignments and any W. Possum Road Improvements.
	K	Any Jackson Road improvements and Extend Sparrow Road.

The alternatives were developed using the red flags, shown in Figure 1, in order to avoid or minimize impacts to any environmentally and/or design sensitive areas. Furthermore, the alternatives were developed using standards from the ODOT Location and Design Manual Volume 1, October 2004. It is necessary to follow these ODOT standards if the project will receive federal or state funding.

The following assumptions were made during the development of the alternatives: For safety purposes, and to develop a roadway that operates similarly to the existing SR 794, all the alternatives except for Alternative G assume a 55 mph speed limit, an 80-foot right-of-way, and eight-foot wide shoulders. Alternative G assumes a 45 mph speed limit, a 60-foot right-of-way, and eight-foot wide shoulders (See Figure 4).

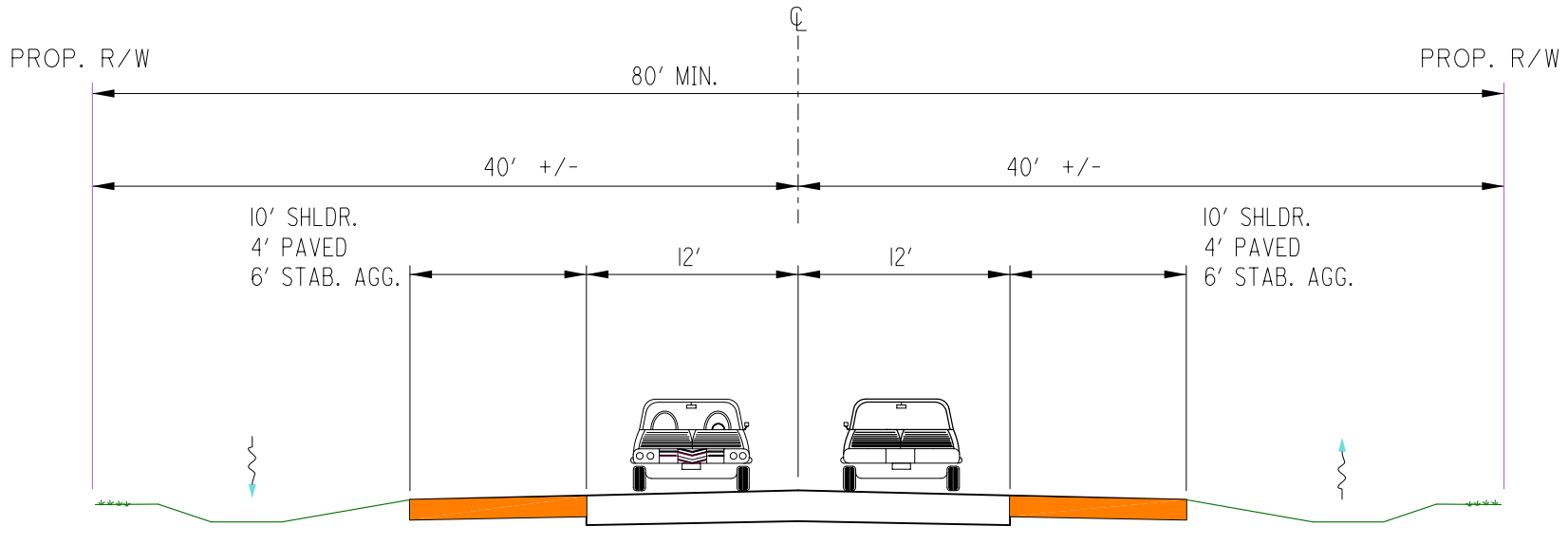
All of the alternatives are on the base map to scale showing the impacts of each alternative. See Figure 5 for Alternatives B and C, Figure 6 for the SR 794 Vicinity Alternatives, Figure 7 for the Jackson Road Vicinity Alternatives, and Figure 8 for the W. Possum Road Vicinity Alternatives.

Figure 4. Typical Sections



RURAL TYPICAL SECTION

LOW VOLUME
NOT TO SCALE



RURAL TYPICAL SECTION

MODERATE VOLUME
NOT TO SCALE

TETRA TECH
1328 DUBLIN ROAD
COLUMBUS, OHIO 43215

S.R. 794 SUB-AREA STUDY

TYPICAL SECTIONS

SR 794 Sub Area Study - Alternative B

CLARK COUNTY-SPRINGFIELD
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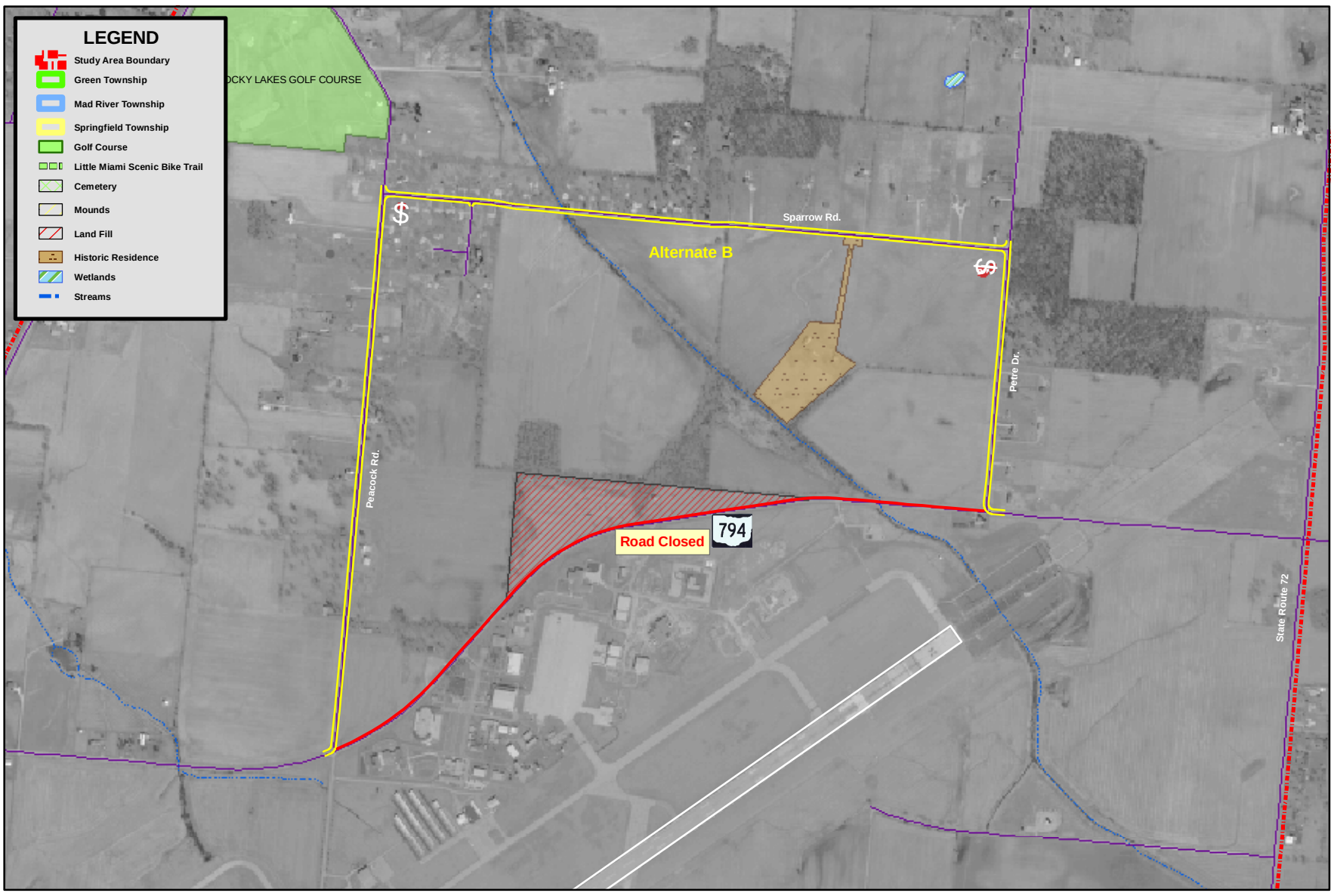

SR 794 Sub Area Study - Alternative C

CLARK COUNTY-SPRINGFIELD
TRANSPORTATION COORDINATING COMMITTEE

http://www.clarktcc.com

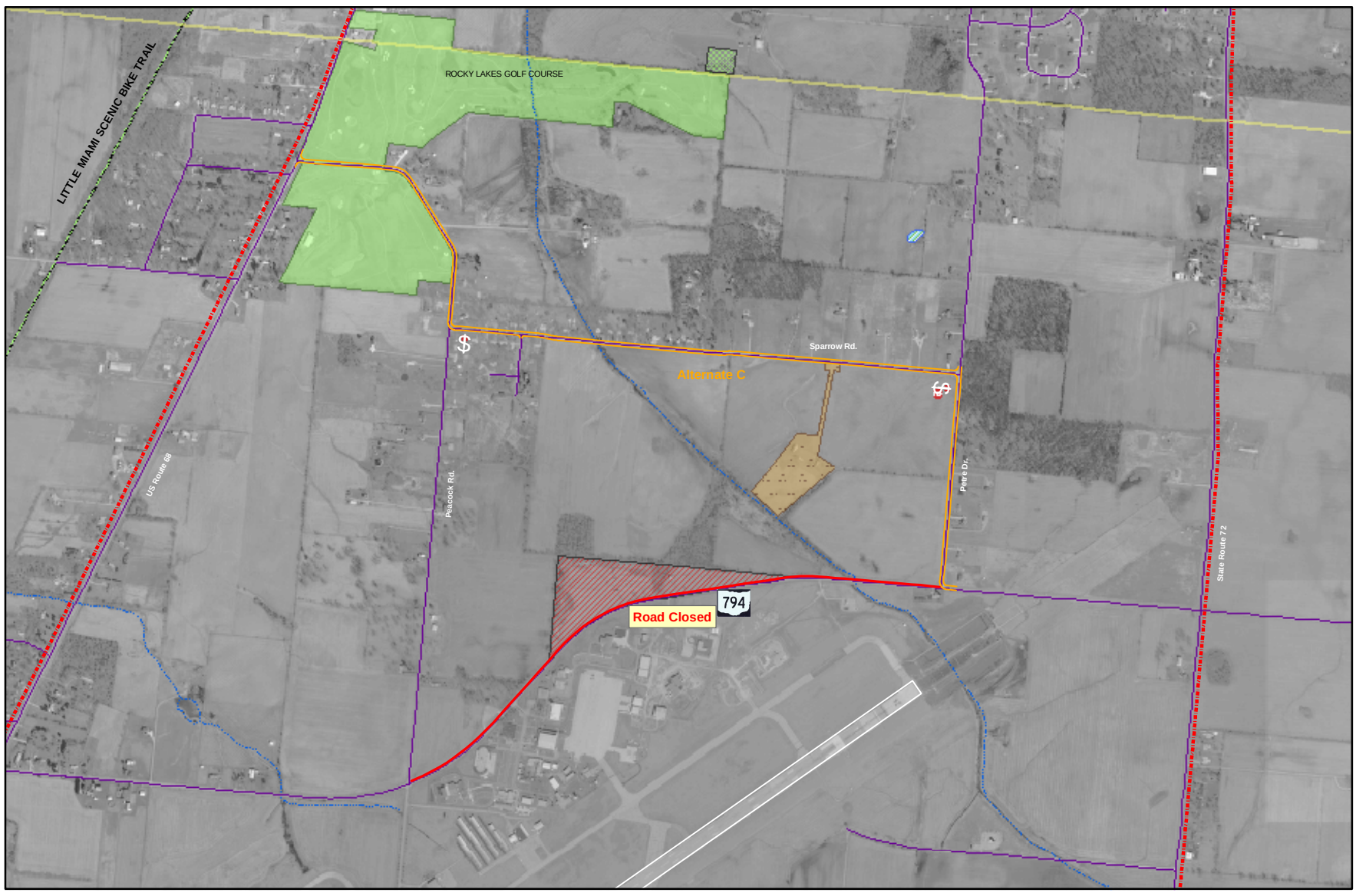

Figure 5: Alternatives B and C

SR 794 Sub Area Study - Jackson Road Vicinity

CLARK COUNTY-SPRINGFIELD
TRANSPORTATION COORDINATING COMMITTEE

http://www.clarktcc.com

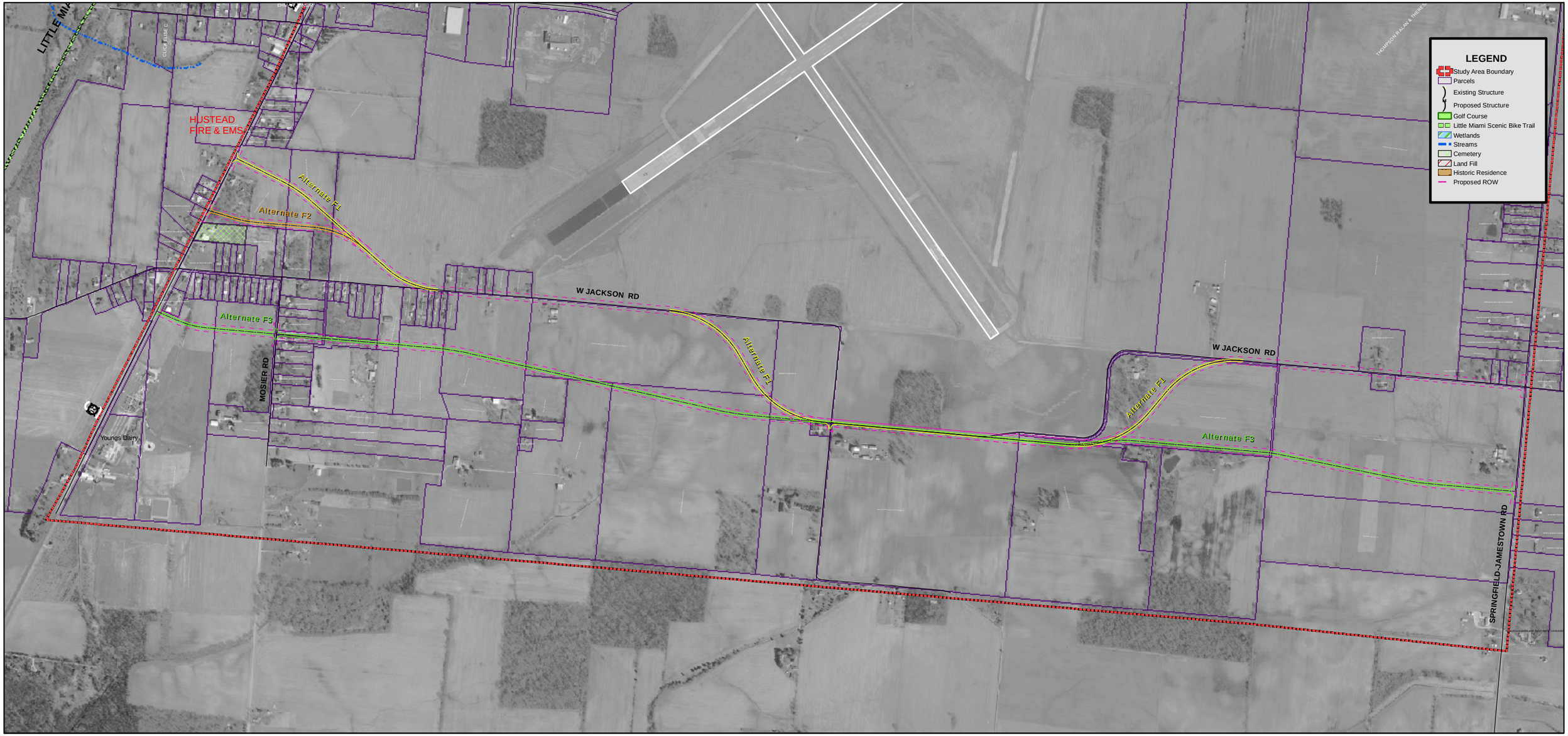

Figure 7: Jackson Road Vicinity Alternatives

CLARK COUNTY-SPRINGFIELD
TRANSPORTATION COORDINATING COMMITTEE

SR 794 Sub Area Study - SR 794 Vicinity

http://www.clarktcc.com

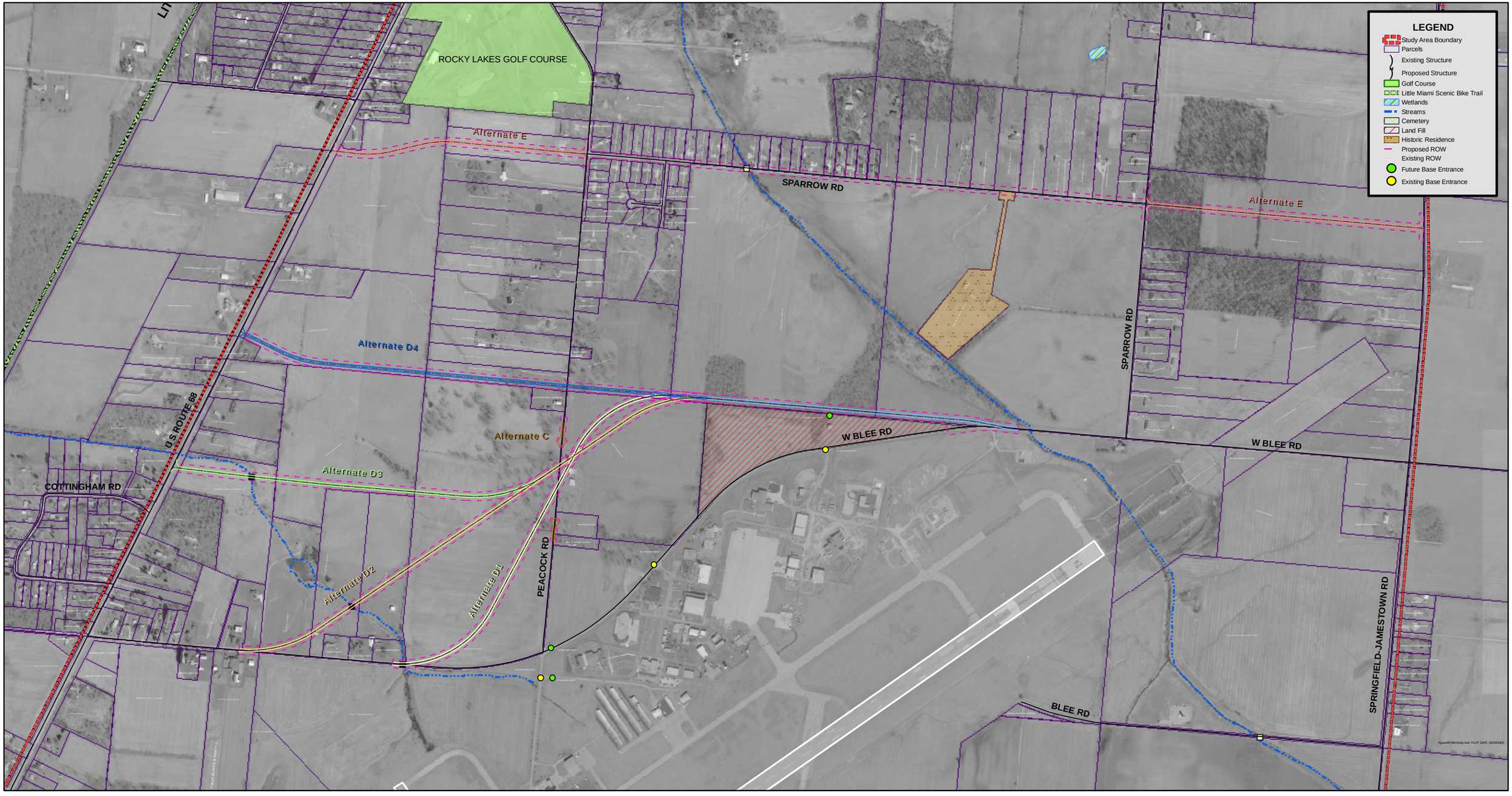

Figure 6: SR 794 Vicinity Alternatives

SR 794 Sub Area Study - W. Possum Vicinity

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TRANSPORTATION COORDINATING COMMITTEE

http://www.clarktcc.com

Figure 8: W. Possum Road Vicinity Alternatives

6.2 Right of Way Impacts

The right of way required for construction of each alternative is included in Table 10. The table shows the area in acres that each of the alternatives would require according to the typical section standards. The analysis includes land currently used for residential use (i.e. parcels currently with at least one residential building). If an alternative significantly impacted a property such to render it unusable, the calculations assume the entire property would need purchased for the project.

Table 10: SR 794 Alternative Right of Way Requirements

Alternative	Total Right of Way (acres)	Residential Land Needed for Alternative (acres)	Total Size of Property with Residential Use (acres)
G1	7.39	0.61	1.71
G2	8.2	0.47	
G3	14.76	1.19	2.99
G4	15.71	1.19	2.99
E	17.19	2.55	7.69
D4	13.65	2.56	5.14
D3	15.71		
D2	15.47		
D1	13.25		
F2	28.38		
F1	28.46		
F3	26.55	0.92	1.23

The analysis used the right of way required for each alternative to calculate the probable right of way cost associated with each alternative. The analysis estimated property values in the study area using guidance from ODOT District 7. The guidance stated that agricultural land use prices varied from $3,000 to $5,000 per acre and residential/commercial land use (land only) varied from $15,000 to 20,000 per acre.

The analysis calculated the cost for a residential property, when the entire property needed purchased, using Clark County's web site for county tax values. The tax values are listed for 35 percent of the market value of the homes; therefore, the analysis calculated and used the 100 percent value. Appendix F contains copies of the tax sheets for affected properties. The analysis verified property values by contacting a real estate agent. For example, the real estate agent for 4995 Peacock Road confirmed the property is five acres of which two acres are rented for farming. The 35 percent tax value listed by the county is $65,190. The 100 percent value is $186,257. In January 2006 the property sold for $213,000.

6.3 Cost Analyses for Alternatives

The cost analysis calculated the total costs for each alternative using construction and inspection costs, design costs, and right of way calculations. More specifically, the analysis calculated probable costs using estimated quantities for materials from the conceptual design and the price per quantity from the ODOT web site on current prices as of September 26, 2005. The analysis estimated quantities of materials by multiplying across the width of the road for the length of the new alignment. Furthermore, the analysis used quantities of materials for excavation for the new roadbed and a 72-inch culvert for any stream crossings. An excavation quantity assumed that the roadways would require full depth pavement and shoulder widening to handle heavy truck loads and movements. To account for other various items such as displaced earthwork between the top of the road to the bottom of the base, the analysis added a 30 percent contingency.

The cost analysis for right of way first calculated the area needed for each alternative minus the area needed for a total residential property purchase with each corresponding alternative. The analysis then multiplied the area by $3,000 per acre to get the low range cost and by $5,000 per acre to get the high range cost. The calculation then added to each alternative the calculated value for any total property purchase within that alternative. The costs used for the alternative's total cost was calculated using the high range cost plus 10 percent for contingencies. The total cost for each alternative also includes an additional 20 percent to account for design and construction inspection costs.

The cost analysis also included a cost estimate for a pavement overlay and full depth shoulder widening on the existing Peacock, Sparrow, and W. Possum Roads. However, the analysis does not show this cost estimate in the total cost for the alternatives using these roadways, because these roadways do not have an adequate base to handle the additional traffic and heavy truck loads that may use them. With only an overlay on these roadways, the expected life of the pavement is a few years instead of the twelve year average life for a surface treatment. Multiple overlays within the 12 years would cost Clark County additional money. Following are the cost estimate for overlay and full depth shoulder widening for the existing Peacock, Sparrow, and W. Possum Roads:

- Upgrade Sparrow Road from U.S. 68 to Petre Road: $837,900
- Upgrade between SR 794 and Sparrow Road: $228,200
- Upgrade Petre Road from Sparrow Road to W. Possum Road: $657,900

See Table 11 for the right of way costs associated with each alternative.

Table 11: Right of Way Costs for Each Alternative

Alternative	Acres needed	Total Purchase Acreage	Acres for R/W estimate	$3,000/acre	$5,000/acre	Cost of Purchase (Clark County Total Tax Value X 3) Properties Purchased		Cost Range Low	Cost Range High
B	19.74		19.74	$59,220	$98,700			$59,220	$98,700
C	19.74		19.74	$59,220	$98,700			$59,220	$98,700
D1	13.25		13.25	$39,750	$66,250			$39,750	$66,250
D2	15.47		15.47	$46,410	$77,350			$46,410	$77,350
D3	15.71		15.71	$47,130	$78,550			$47,130	$78,550
D4	13.65	5.14	8.51	$25,530	$42,550	$220,000	$120,000	$365,530	$382,550
E	17.19	7.69	9.5	$28,500	$47,500	$268,080		$296,580	$315,580
F1	28.46		28.46	$85,380	$142,300			$85,380	$142,300
F2	28.38		28.38	$85,140	$141,900			$85,140	$141,900
F3	26.55		26.55	$79,650	$132,750	$33,360	$104,640	$217,650	$270,750
G1	7.39	1.71	5.68	$17,040	$28,400	$81,540		$98,580	$109,940
G2	8.2		8.2	$24,600	$41,000			$24,600	$41,000
G3	14.76	2.99	11.77	$35,310	$58,850	$235,290	$2,310	$272,910	$296,450
G4	15.71	2.99	12.72	$38,160	$63,600	$235,290	$2,310	$275,760	$301,200

6.4 Conceptual Alternatives Comparison

The study team developed evaluation measures to narrow the conceptual alternatives to a preferred conceptual alternative. The evaluation measures included:

- Traffic Impacts
- Property Impacts
- Environmental Resource Impacts
- Design
- Probable Cost
- Meeting Study Goals

Applying the evaluation measures allowed for a comparison of alternatives against each other and against the goals of the study. Table 12 is a comparison matrix of the alternatives and includes the total cost (right of way and construction) for the alternatives.

Attachment E-12

Table 12: Comparison Matrix

Evaluation Criteria		Closures/Upgrades				SR 794 Vicinity					Jackson Road Vicinity			W. Possum Road Vicinity				Combinations			
		A	A2	B	C	D1	D2	D3	D4	E	F1	F2	F3	G1	G2	G3	G4	H	I	J	K
		Relocate ANG Buildings	Harden ANG Buildings	Close SR 794 between Sparrow and Peacock, Upgrade Sparrow and Peacock Roads	Close Peacock between SR 794 and Sparrow, Close SR 794 at Sparrow Road, Upgrade Sparrow Road, Cul-de-sac Peacock Road	Realign SR 794 from Mill Creek to near Airport entrance	Realign SR 794 from Mill Creek with long curves	Realign SR 794 from Mill Creek to US 68 near Cottingham Road. North	Realign SR 794 straight from Mill Creek to US 68	Close 794 and extend & upgrade Sparrow Road	Straighten curves and upgrade Jackson Road and realign west end (north)	Straighten curves and upgrade Jackson Road and realign west end (south)	Jackson Road new alignment	New Alignment for W. Possum Road. connecting with Fairfield Pike	New Alignment for W. Possum Road. connecting with Springfield-Xenia Road	New Alignment for W. Possum Road. - Connecting E. Possum Road with US 68 at US 68/Springfield-Xenia Road intersection	New Alignment for W. Possum Road. connecting E. Possum Road with US 68 south of Midwest Storage	Close 794, Improve Jackson, & New W. Possum Road	Improve Jackson & Realign SR 794	Realign 794 and W. Possum Road.	Improve Jackson and Extend Sparrow Road
Travel time difference from Hustead Fire/EMS station to current SR 794 and SR 72 intersection	0-1:00=Low 1:01-2:00=High >2:01=High	0	0	High	High	0	0	Low	Low	Medium	Low	Low	Low	High	High	High	High	Low	Low	0	Low
Traffic Counts (2025 model)	794																				
	Peacock			71%																	
	Sparrow			46%	25%																
	W. Possum Rd.			-1%																	
	Jackson			295%	308%						350.0%	350.0%	350.0%					350.0%			
	US 68			6%	6%																
Bisected Properties	# of Parcels					2	3	4	1	2	3	5	12	5	3	3	3	6-17	4-16	4-9	5-14
Property Impacts (# of properties)	Woodland			1	1									1		1	1	0-1		0-1	
	Farmlands			3	3	4	7	6	5	5	13	13	13	3	2	1	1	14-16	17-20	5-10	18
	Developed			36	23				1	2			3	1	1	3	3	1-6	0-3	1-3	19-22
Relocations	#								1	1			2	1	1	2	2	1-4	0-3	0-3	0-3
	Acres								5.14	7.69			1.23	1.71	1.5	2.99	2.99				
	Perennial															2	2	0-2		0-2	
	Intermittent/Ephemeral						6	4	2	3	1	1	4		1	3	3	1-4	2-7	1-9	4-7
Properties w/ Hazardous Materials (# of locations)											2	1						1-2	1-2		1-2
Cultural resource impacts	Historical/4(f)			1	1									1	1			0-1		0-1	
	Archaeological															1	1	0-1		0-1	
Total Wetlands Impacted	# of wet meadows					1	1	1	1	2						3	3	0-3	1	1-4	2
	Category II																				
Endangered Species	Potential Habitat										1	1	1					1	1		1
# of Structures							1	1								2	2	0-2	0-1	0-3	
Utility Relocations																					
Meeting Long	Airport			No	Yes	No	No	No	Yes	Yes											

Evaluation Criteria		Closures/Upgrades				SR 794 Vicinity					Jackson Road Vicinity			W. Possum Road Vicinity				Combinations			
		A	A2	B	C	D1	D2	D3	D4	E	F1	F2	F3	G1	G2	G3	G4	H	I	J	K
Range Plan	MPO			No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
	OANG Base			No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes	Yes
Allows for Continuous Base Property				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes
New Construction		$13,600,000				$1,451,900	$1,626,000	$1,663,200	$1,416,700	$953,670	$3,827,310	$3,819,710	$3,007,620	$402,200	$990,100	$1,794,000	$1,736,000	$3,409,820	$4,670,820	$2,065,400	$3,961,290
Right of Way (low)				$59,220	$59,220	$39,750	$46,410	$47,130	$365,530	$296,580	$85,380	$85,140	$217,650	$98,580	$24,600	$272,910	$275,760	$316,230	$264,780	$145,710	$514,230
Right of Way (high)				$98,700	$98,700	$66,250	$77,350	$78,550	$382,550	$315,580	$142,300	$141,900	$270,750	$109,940	$41,000	$296,450	$301,200	$380,690	$349,300	$188,490	$586,330
				$59,220-$98,700	$59,220-$98,700	$41,730-$69,550	$46,410-$77,350	$47,130-$78,550	$99,840-$352,940	$135,530-$169,910	$85,200-$142,000	$85,200-$142,000	$125,650-$178,750	$49,350-$64,130	$24,600-$41,000	$123,480-$153,000	$128,066 – $159,486	$175,000-$242,880	$172,780-$257,300	$96,480-$142,680	$261,180-$348,660
Right of Way used for estimate(high + 10%)				$108,570	$108,570	$72,875	$85,085	$86,405	$420,805	$347,138	$156,530	$156,090	$297,825	$120,934	$45,100	$326,095	$331,320	$418,759	$384,230	$207,339	$644,963
Repavement				$4,008,690	$3,406,400					$1,741,530				$1,926,030	$880,400			$1,926,030	$0	$1,926,030	$1,741,530
Total Cost		$13,600,000		$4,117,260	$3,514,970	$1,524,775	$1,711,085	$1,749,605	$1,837,505	$3,042,338	$3,983,840	$3,975,800	$3,305,445	$2,449,164	$1,915,600	$2,120,095	$2,067,320	$5,754,609	$5,055,050	$4,198,769	$6,347,783
Total Cost with 20% for Design and Construction Inspection		$13,600,000		$4,940,712	$4,217,964	$1,829,730	$2,053,302	$2,099,526	$2,205,006	$3,650,806	$4,780,608	$4,770,960	$3,966,534	$2,938,997	$2,298,720	$2,544,114	$2,480,784	$6,905,531	$6,066,060	$5,038,523	$7,617,340
Meets or exceeds military security standards		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Has minimal impact to the surrounding community		**No**		**No**	**No**	Yes	Yes	Yes	Yes	**No**	**No**	**No**	**No**	Yes	Yes	Yes	Yes	**No**	**No**	Yes	**No**
Provides for adequate emergency and other public services		**No**		**No**	**No**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	**No**	**No**	**No**	**No**	Yes	Yes	Yes	Yes
Meets the purpose and need		**No**		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	**No**	**No**	**No**	**No**	Yes	Yes	Yes	Yes
Meets the TCC's transportation plan, the OANG's master plan, and the Airport's master plan		**No**		**No**	**No**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maximizes land area		**No**		**No**	**No**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Provides a safe and efficient local access system		**No**		**No**	**No**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	**No**	**No**	**No**	**No**	Yes	Yes	Yes	Yes

There are problems with Alternative A in relocating the OANG buildings to meet the DOD standards. Although the dining hall is noncompliant with DOD standards, the building's function is essential to the base and can not be accommodated in an existing building. The cost of rehabilitating an existing older building to accommodate the dining hall, or tearing down the dining hall and rebuilding it are expensive options. In fact, the cost estimate for Alternative A is $13.6 million dollars making it the most expensive alternative.

Alternative B is to close SR 794 between Sparrow and Peacock and to upgrade Sparrow and Peacock Roads to accommodate additional traffic and truck loads.

Alternative C would additionally close Peacock between SR 794 and Sparrow, close SR 794 at Sparrow Road, upgrade Sparrow Road, and then cul-de-sac Peacock Road approximately 1,600 feet north of SR 794. These roadways (Peacock and Sparrow) do not currently have an adequate base to handle the additional traffic and heavy truck loads that may use them. The cost for these alternatives included a full depth pavement and full depth shoulder widening on the existing Peacock and Sparrow Roads. These alternatives would not meet the long range plan for the OANG base and would not allow for appropriate emergency access from the Hustead fire station to SR 72.

A majority of the D1 alternative is within property the City of Springfield recently purchased independent of this project. Alternative D1 would have fewer impacts than Alternatives D2 and D3, because D1 does not cross as many intermittent/ephemeral streams and would not require an additional structure.

Alternative D1 looking west at SR 794 and Peacock Road

Alternatives D2 and D3 would require an additional structure over Mud Run, they bisect more properties than D1 and D4, and they would cross more potential wetlands.

Alternative D4, like D1, would have fewer impacts because it does not cross as many intermittent/ephemeral streams and would not require an additional structure. This alignment could also be developed to the south of the old schoolhouse property on Peacock Road, possibly reducing the cost of right of way for the project.

Alternatives D looking east from Peacock Road

Alternative D4 best meets the goal of accommodating future growth. With D4, more area would be opened along the relocated roadway and adjacent to the OANG base to accommodate future growth, than with Alternative D1. However, D4 would add an additional access point along US 68.

Alternative E looking west at Sparrow Road and Peacock Road

Alternatives E and F have more impacts to the surrounding community because right of way would need purchased in front of current homes to bring these roads up to standards. This would cause more traffic to travel in front of these homes and potentially involve more relocations depending on impacts to septic and water systems. As a result of these potential impacts and the public comments received, Alternatives E and F were not further developed.

Jackson Road, Alternative F, looking east at US 68

Clark County could pursue the conceptual improvements in the Jackson Road vicinity, with respect to the curves south of the Airport, independently of this project. The analyses conducted for this study could be used for such a future project, since the red flag summary and planning level cost estimates are complete. This analysis has also shown how to straighten the curves with appropriate geometrics.

Alternative G in the W. Possum Road area does not meet the purpose and need for emergency access. Without another improvement in the Jackson Road or SR 794 vicinity there would be too much travel time for emergency vehicles to get from the Hustead Fire station to the eastern side of its service area, and emergency vehicle would have to travel outside the station's coverage area.

Alternative G alignment looking east from US 68 and Springfield-Xenia Road

A computer simulation based on a traffic demand model run for the traffic in the study area, looked at the magnitude of change of traffic with closing SR 794. The model and simulation showed that traffic would not reroute to alternatives G. Instead, the traffic would use the deficient routes of Sparrow or Jackson Roads. Improvements of roadway deficiencies have a separate purpose and need and could be done in the future to improve mobility for local traffic in the northern part of this study area. The analyses conducted for this study could be used for such a future project, since the red flag summary and planning level cost estimates are complete.

6.5 Other Alternatives Analyzed

In addition to the conceptual alternatives developed by the study team, the public recommended alternatives throughout the public involvement process. All one of the public's recommendations were assessed by the study team, and all but one recommendation was included in one way or another into Alternatives A-H as discussed above.

The public recommended that the OANG build a protective blast wall along SR 794 so that the road may stay open and the buildings may remain in use. Lieutenant Colonel Gebhard, P.E., indicated that the OANG had researched the use of a blast wall and determined a wall would be ineffective. Specific details of the study and reasoning were classified by the military. Therefore, the study team did not further investigate the feasibility of this alternative.

7.0 RECOMMENDATIONS AND STRATEGIC PLAN

7.1 PREFERRED CONCEPTUAL ALTERNATIVE

The TCC Board recommended Alternative D1 as the preferred conceptual alternative (see Figure 9). The TCC based its decision on numerous factors including the following:

First, Alternative D1 met the study's goals, objectives, and purpose and need. By closing SR 794 between Mill Creek to the east and the Springfield-Beckley Municipal Airport entrance to the west, Alternative D1 met force protection requirements of the OANG base. In addition, by constructing a new facility, there remained a connection between US 68 and SR 72 that considered future development of the OANG base and did not adversely impact mobility and emergency response time.

Second, Alternative D1 ranked the highest among all the conceptual alternatives when weighed against measurable evaluation criteria such as construction costs, environmental and community impacts. Alternative D1 had no residential relocations and no predicted environmental impacts. In addition, Alternative D1 was the least expensive alternative. When weighed against moving and reconstructing the buildings currently located too close to existing SR 794, the new roadway alternatives are 7.5 times less expensive. This is a tax payer savings of nearly $11.8 million. The estimated cost for Alternative D1 is $1.8 million to $2 million.

Third, Alternative D1 had a logical termini and independent utility which meant that the improvement was not dependent on the completion of other projects.

And most importantly, Alternative D1 satisfied the public concerns and was a compromise to which the majority of stakeholders and local residents agreed. For example, the local residents were satisfied that Alternative D1 did not relocate residents, did not add an additional access point along US 68 and stayed primarily upon the City of Springfield's property; and, the TCC Board and other stakeholders were satisfied that Alternative D1 met the force protection requirements and allowed for future OANG base expansion.

Realignment of State Route 794
CLA-794- 0.60
Springfield, Clark County, Ohio
Memorandum of Agreement/Level One Ecological Report

PID No. 78677

November 9, 2009
Revised December 7, 2009

Looking south from SR 794 along Mill Creek. Photo taken June 30, 2009.

Prepared for:
Clark County Engineers Office
4075 Laybourne Road
Springfield, Ohio 45505

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V. Aquatic Ecology

The realignment of SR 794 due north is in the vicinity of three tributaries. The project area is located in the Mad River Basin. The OEPA conducted biological and water quality testing throughout this basin in 2003 to reevaluate the area and update their classifications as Warm Water Habitat (WWH) with field testing. Previous assessments of the area had been executed without field confirmation. Streams within the project area and discussed in this report include Unnamed Tributaries 1, 2, 3, 5, and Mill Creek. Unnamed Tributary 4 is not mentioned and is a tributary to the stream, Unnamed Tributary 2.

Aquatic sampling of all identified streams was not conducted as it is not required for streams with watersheds of less than one square mile and depth of less than 40 centimeters as outlined in the ODOT Section 200 Ecological Manual published in January, 2005. Aquatic sampling of Mill Creek is not warranted under the same publication because of a verified WWH aquatic life use classification and no known aquatic endangered species in the area as listed by the Ohio Department of Natural Resources (ODNR) Natural Heritage Database. Minimal baseline water quality data was collected in the field to supplement existing data. Mad River is not listed as a known location of any endangered mussels. See Appendix B Exhibit 4 for tributary locations within the investigated area. Additional habitat data is as follows.

Streams

Unnamed Tributary 1 to Unnamed Tributary 2

Unnamed Tributary 1 flows northeasterly into Unnamed Tributary 2 at the culvert beneath SR 794. The tributary's main substrate was silt and leafy vegetation from cattails present in the area. An HHEI was performed and the tributary was classified as a Modified Class II Primary Headwater Habitat (PHWH) with a score of 62. The likely source of water for the tributary is stormwater discharge from the nearby Springfield Beckley Municipal Airport (OEPA 2005). Appendix B Exhibit 5 shows the location of this tributary in relation with its watershed. The HHEI data sheet can be found in Appendix C for UNT 1 to UNT 2. Photographs 27-30, 35-37, 41, 42, and 44 seen in Appendix A highlight UNT 1.

Unnamed Tributary 2 to Mud Run

Unnamed Tributary 2 flows westerly along SR 794 then turns due north before turning northwesterly and eventually flowing into Mud Run. The main substrate for the tributary is gravel and sand with some cobbles present. An HHEI performed for the tributary yielded the result of Modified Class III with a score of 76. The stream has an aquatic habitat classification of WWH (OEPA 2005). The likely source of flow is runoff and discharge from the nearby airport and air base. Several field tiles empty into the tributary as well. The stream supported a good community of macroinvertebrates. However, the stream was found to be in non-attainment with its WWH classification as a study of biotic species lacked a large community of fish suggesting intermittent water levels and flow. OEPA is currently maintaining the WWH classification until a PHWH study can be completed (OEPA 2005). The HHEI data sheet can be found in Appendix C for UNT 2. Photographs 45- 50, 56, 57, 60, 66, 67, 71, and 72 seen in Appendix A highlight UNT 2.

In addition, baseline water quality analysis was conducted on September 16, 2009. Sampling was conducted immediately upstream of the culvert carrying SR 794 over UNT 2 and downstream of the confluence with Unnamed Tributaries 1 and 3. The following table summaries the data collected.

Unnamed Tributary 3 to Unnamed Tributary 2

UNT 3 flows northerly and converges with UNT 2 at the culvert beneath SR 794. The main substrate is sand and gravel. A HHEI performed for the tributary classified it as a Modified Class III PHWH with a score of 71. Stormwater and discharge from the nearby air fields are the likely source of flow for the stream (OEPA 2005). The HHEI data sheet can be found in Appendix C for UNT 3 to UNT2. Photographs 73, 74, and 79-86 seen in Appendix A highlight UNT 3.

Unnamed Tributary 4 to Unnamed Tributary 2

UNT 4 flows westerly in a poorly defined channel through several residential yards and agricultural fields before emptying into UNT 2. No flow was present during investigation but a soil sample revealed slight saturation. Main channel substrate was silt and gravel where a defined channel existed. An HHEI was performed, and the tributary was classified as a Modified Class II PHWH tributary with a score of 46. Flow is primarily from ditches along Peacock Road and natural drainage from fields and residential yards. The HHEI data sheet can be found in Appendix C for UNT 4. Photographs 151, 152, 156-159, 174, and 176-178 seen in Appendix A highlight UNT 4.

Unnamed Tributary 5 to Mill Creek

UNT 5 flows northerly before turning northeasterly and emptying into Mill Creek. The substrate was dominated by silt and sand. The tributary cuts through a well-established timber stand and receives flow from agricultural runoff, as well as discharge from the nearby air fields (OEPA 2005). An HHEI was performed and the tributary was classified as a Modified Class II PHWH with a score of 65. The stream likely supports a fair community of macroinvertebrates but lacks the permanent habitat features to support continued growth due to its high silt load and intermittent flow. The HHEI data sheet can be found in Appendix C for UNT5. Photographs 183-184 seen in Appendix A highlight UNT 5.

In addition, baseline water quality analysis was conducted on September 16, 2009. Sampling was conducted immediately downstream of the culvert carrying SR 794 over UNT 5. The following table summaries the data collected. It should be noted dissolved oxygen levels within the tributary were noted below the level capable of supporting aquatic life. Flow within this stream was intermittent, and no fisheries or aquatic macroinvertebrates were noted within the stream.

Mill Creek

Mill Creek is the largest body of water in the project area. The stream flows northwesterly before turning north and emptying into the Mad River. The main substrate for the channel is gravel and silt with some cobbles and boulders present. The channel within the investigational area is modified, but recovering. A QHEI performed for the section within the project corridor found the stream was in fair condition with a score of 58. OEPA classifies this stream as an aquatic WWH. Mill Creek is an urban stream that receives discharge from both air fields and the Springfield Beckley Airport wastewater treatment plant (OEPA 2005). The QHEI data sheet can be found in Appendix C for Mill Creek. Photographs 232-238, 246-250, and 252-253 seen in Appendix A highlight Mill Creek.

In addition, baseline water quality analysis was conducted on September 16, 2009. Sampling was conducted immediately upstream of the culvert carrying SR 794 over Mill Creek. The following table summaries the data collected.

Table 1: Summary of Stream Resources within CLA-794-0.60 (PID 78677) Study Area

Stream Name	Drainage Class	11-Digit HUC	HHEI/QHEI	Score	Drainage Area (square miles)	Provisional Classification	Water Body Category*	Linear Feet of Stream Segment in Study Area	**Temp °C	**DO mg/L	**Conductivity µs	**pH	Photos
Unnamed Tributary 1	Ephemeral	05080001190	HHEI	62	0.05	Modified Class II	Non-RPW	180	18	6.38	108	7.6	27-30, 35-37, 41, 42, 44
Unnamed Tributary 2	Ephemeral	05080001190	HHEI	76	0.69	Modified Class III	Non-RPW	1450	18	6.38	108	7.6	45-50, 56, 57, 60, 66, 67, 71, 72
Unnamed Tributary 3	Ephemeral	05080001190	HHEI	71	0.06	Modified Class III	Non-RPW	415	18	6.38	108	7.6	73, 74, 79-86
Unnamed Tributary 4	Ephemeral	05080001190	HHEI	46	0.06	Modified Class II	Non-RPW	200	NA***	NA	NA	7.6	151, 152, 156 159, 174, 176 178
Unnamed Tributary 5	Intermittent	05080001190	HHEI	65	0.17	Modified Class II	Non-RPW	460	18.2	0.6	177.8	7.1	183-184
Mill Creek	Perennial (interstitial)	05080001190	QHEI	58	2.88	Warmwater Habitat	RPW	730	18.3	7.25	126.7	7.8	232-238, 246-250, 252-253

*Determination of whether or not a drainage feature is or is not a Relatively Permanent Water (RPW) is subject to verification by the USACE

**Data for Unnamed Tributaries 1 and 3 were taken in downstream of their locations within Unnamed Tributary 2.

***No water present in channel

Table 2: Hydrologic Connection Analysis of Stream Resources Associated with the CLA-794-0.60 (PID 78677) Study Area

Stream Name	Water Body Category*	Flow Regime	Drainage Sequence to TNW**	Photo #
Unnamed Tributary 1	Non-RPW	Ephemeral	UNT 1 → UNT 2 → Mud Run → Mad River → Great Miami River	27-30, 35-37, 41, 42, 44
Unnamed Tributary 2	Non-RPW	Ephemeral	UNT 2 → Mud Run → Mad River → Great Miami River	45-50, 56, 57, 60, 66, 67, 71, 72
Unnamed Tributary 3	Non-RPW	Ephemeral	UNT 3→ UNT 2 → Mud Run→ Mad River→ Great Miami River	73, 74, 79-86
Unnamed Tributary 4	Non-RPW	Ephemeral	UNT 4 →UNT 2 → Mud Run → Mad River →Great Miami River	151, 152, 156-159, 174, 176-178
Unnamed Tributary 5	Non-RPW	Intermittent	UNT 5 → Mill Creek → Mad Run → Great Miami River	183-184
Mill Creek	RPW	Perennial (interstitial)	Mill Creek→ Mad Run →Great Miami River	232-238, 246-250, 252-253

*Determination of whether or not a drainage feature is or is not a Relatively Permanent Water (RPW) is subject to verification by the USACE

**TNW - Traditional Navigable Water

VI. Terrestrial Habitat

The project area falls in the Mad River Interlobate Area of the Eastern Corn Belt Plains ecoregion and the Mad River Interlobate Plain physiographic region of Ohio. Forest habitat was present at several locations on the north side of SR 794. Land use within the project area is dominated by agricultural use, predominately row crops, pasture, and fallow field. Other land uses within the project corridor include residential, forested, wetland, and airport. For reference to land use in the project vicinity, see the Appendix B.

Table 3: Land Use Summary of the CLA-794-0.60 (PID 78677) Study Area

Habitat Type	Acres within Study Area
Row Crop	79.8
Pasture	5.97
Grassland/Herbaceous	4.61
Deciduos Forest	10
Woody Wetland	0.44
Emergent Wetland	0.22
Scrub/Shrub	0.4
Low Intensity Development	6.08
Medium Intensity Development	8.44
Transportation	4.53

An area of established forest is present in the northwest corner adjacent to the Clark County Municipal Waste District Landfill. Another larger stand of forest is present in the adjacent northeast corner to the landfill. This second stand encompasses UNT 5 to Mill Creek. Tree species noted during the surveys included the following. The western woodlot was dominated by hickory, oak, and green ash. The western woodlot was dominated by black walnut with green ash dominant around UNT 5. Fence rows were dominated by green ash, mulberry, and hackberry.

Latin Name	Common Name	Wetland Indicator
Acer negundo	box elder	FACW-
Acer saccharum	sugar maple	FACU-
Aesculus glabra	Ohio buckeye	FACU+
Carya laciniosa	shellbark hickory	FAC
Carya ovata	shagbark hickory	FACU-
Celtis occidentalis	hackberry	FACU
Fraxinus americana	white ash	FACU
Fraxinus pennsylvanica	green ash	FACW
Juglans nigra	black walnut	FACU
Morus alba	mulberry	UPL
Populus deltoides	eastern cottonwood	FAC
Prunus serotina	black cherry	FACU
Quercus alba	white oak	FACU-
Quercus imbricaria	shingle oak	FAC
Quercus rubra	red oak	FACU-
Robinia pseudoacacia	black locust	FACU-
Ulmus americana	American elm	FACW-

Primary herbaceous vegetation noted within in these woodlots included yellow avens in the herbaceous stratum and bush honeysuckle in the scrub stratum. Species noted below were those identified in the upland data points.

Latin Name	Common Name	Wetland Indicator
Acer negundo	box-elder	FACW-
Agrimonia gryposepala	tall hairy groovebur	FACU
Ambrosia trifida	giant ragweed	FAC
Carya ovata	shag-bark hickory	FACU-
Geum aleppicum	yellow avens	FAC
Juglans nigra	black walnut	FACU
Lonicera x bella	honeysuckle	FACU-
Parthenocissus quinquefolia	Virginia creeper	FACU
Quercus alba	white oak	FACU-
Rubus occidentalis	black raspberry	NI
Solidago gigantea	giant golden-rod	FACW
Ulmus americana	American elm	FACW-
Xanthium strumarium	rough cockle-bur	FAC

Typical wildlife species were observed in the area. Signs of raccoon, eastern cottontail, or opossum and white-tailed deer were noted.

VII. Endangered Species

A review of the ODNR Natural Heritage Database revealed the presence of one known Ohio threatened species, as listed on the ODNR list, within the project area. The upland sandpiper (*Bartramia longicauda*) is known to inhabit the area roughly defined as the 178th Fighter Wing of the Ohio Air National Guard Springfield Base and the Beckley Municipal Airport, as indicated on Exhibit 11 Appendix B. This area will be impacted by the construction of Airport Drive associated with the realignment of SR 794. Upland sandpiper breeding habitat consists of grasslands, pastures, and fallow agricultural land with a mosaic of old fields and crop lands, and sometimes the grassy expanses of airports. It is not anticipated the proposed project will disturb the bird's habitat as construction is anticipated to occur adjacent to existing roadways.

Clark County is also known to include populations of the federally listed species Indiana Bat (*Myotis sodalis),* the Eastern prairie fringed orchid (*Platanthera leucophaea),* and the Eastern massasauga *(Sistrurus catenatus)* (US Fish and Wildlife Service, 2009.) During field investigation, none of these federally listed species were observed in the area.

Summer habitat for the Indiana Bat consists of trees with loose or exfoliating bark or in tree hollows. Roost trees are generally live or standing dead trees or snags over eight inches DBH with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities. Maternity roost trees are generally live or standing dead trees or snags over 16 inches DBH with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities. These characteristics must be plentiful enough to allow the colony to change locations along the tree to aid in thermoregulation. If the habitat characteristics are found only on the branches of the tree, the branches must be at least eight inches in diameter at the site of the habitat characteristics. These trees must have some solar exposure and be within sight distance of at least one other potential maternity roost tree. These trees must be part of or connected to a travel corridor or larger forested area. Winter habitat consists of caves and abandoned mines which provide and maintain a cool and stable temperature.

Populations of mature trees with exfoliating bark suitable for Indiana bat habitat were noted in the forested and residential areas within and adjacent to the project corridor. The project study corridor crosses through two woodlots connected by a wide fencerow. The total area of the two woodlots and fencerow is 12.8 acres, of which approximately 9 acres is within the study corridor. The approximate area of anticipated right-of-way within the study corridor was investigated to locate potential roost and maternity roost trees. This area is approximately 5.2 acres in size.

Within the approximate area of the anticipated right-of-way, 354 trees greater than eight inches in diameter were noted. Of those, 17 trees exhibited potential Indiana bat roost habitat. These include trees greater than eight inches in diameter with any loose or dead bark and shag-bark hickories. Many roost trees noted exhibited only minimal habitat consisting of one dead branch or area of loose bark. Of the potential roost trees noted, a few were large enough to sustain a maternity colony but lacked either a sufficient quantity of habitat or were not within site distance of another maternity tree and therefore were not classified as maternity roost trees.

It is anticipated more than ten potential roost trees will be removed as part of the proposed project. As such, the woodlots and fence rows to be removed were examined to determine the quality and

suitability of the overall habitat within the woodlot. Within the project corridor, the woodlots contain a relatively high density of hardwood trees species such as oak, ash, hickory, and walnut greater than eight inches DBH. Many of the largest trees are located at the edge of the woodlots indicating they were potentially part of older fence rows. The woodlots themselves appear to be planted as they contain a large number of trees of the same species and size classification. The quality of potential roost trees is poor with most trees exhibiting very limited potential habitat. It is not anticipated the woodlot to be impacted would provide suitable Indiana bat habitat as there are limited high quality roost trees available and there is very little adjacent wooded habitat.

Within the project corridor, approximately half of the woodlot and fencerow habitat will be removed. However, within the five miles of the project corridor, there are multiple larger woodlots along riparian corridors that would provide more suitable Indiana bat habitat than that found within the project corridor.

The ODNR Natural Heritage Database did not reveal any known populations of Indiana bat within five miles of the project area. A seasonal ban on tree removal would be warranted to prevent any unknown bat populations from being impacted.

The Eastern prairie fringed orchid is generally found in areas receiving full sunlight with neutral to calcareous soils such as mesic to wet prairies, marshes, fens, and old fields. The majority of the project corridor is either actively farmed, pasture, or forested lands (ODNR, 2007). No habitat for the Eastern prairie fringed orchid was noted within or adjacent to the project corridor during the field investigation.

The Eastern massasauga rattlesnake is generally found in wet prairies, sedge meadows, and early succession fields. Preferred wetland habitats also include are marshes and fens. The snakes generally avoid open water with a preference for broad leafed emergent wetlands (ODNR). No habitat for the Eastern massasauga rattlesnake was noted within or adjacent to the project corridor during the field investigation.

VIII. Wetlands

Four wetlands were delineated during the field investigation. Delineation was executed using topographic, vegetative, and hydrologic indicators to identify wetlands as outlined in the USACE manual. Exhibits 12 through 15 of Appendix B indicate the mapped wetlands individually and collectively for reference. One large wetland adjacent to the southwest bank of Mill Creek was delineated as well as three smaller wetlands. The wetlands are summarized below. Data sheets and ORAM forms for each of the wetlands areas can be seen in Appendix C.

Table 4: Summary of Wetland Resources within the CLA-794-0.60 (PID 78677) Study Area

Wetland ID	HUC 11-Digit	Wetland Habitat Types	ORAM Score	ORAM Category	Connection	Total Area (Acres)	Area in Study Area (Acres)	Photo #
Mill Creek	05080001190	PSS and PFO	32	1 or 2 gray zone	Adjacent	4.74	0.56	222-227
A	05080001190	PEM	13	1	Isolated	0.22	0.15	104-106
B	05080001190	PEM	20	1	Abutting	0.04	0.04	167-171
C	05080001190	PEM	28	1	Adjacent	0.01	0.01	27-44

Mill Creek Wetland

The Mill Creek Wetland is represented by Data Points 16 and 17 (DP 16- MC Wet, and DP 17- MC Wet). The wetland occupies a natural depression located between the farmed field west of the creek and the western bank of the creek comprising approximately 4.74 acres. A slight rise in elevation along the bank of the creek strengthens this topographic depression and serves as a levee to keep the area moist. The area is composed of two different wetland types: forested and scrub/shrub. A wetland dominated by jewel weed (*Impatiens capensis*) and sandbar willow (*Salix* exigua) saplings occupies a portion of an area with Carlisle Muck undrained soils. The remaining portions of the wetland occupy a region of Sloan silt loam, sandy substratum occasionally flooded with vegetation dominated by yellow avens (*Geum aleppicum)* and green ash (*Fraxinus pennsylvanica).*

The ORAM score for this wetland was 32, indicating this wetland is a Category 1 or Category 2 Gray Zone Wetland. This wetland is hydrologically connected to Mill Creek.

Exhibit 13 Appendix B exhibits the wetlands in their entirety. Wetland determination sheets can be found in Appendix C for Data Points 16 and 17 (DP 16- MC Wet, and DP 17- MC Wet). ORAM forms can be found in Appendix C for the Mill Creek Wetland. Photographs 222-227 seen in Appendix A highlight the Mill Creek Wetland. Dominate vegetation noted within this wetland area is noted below.

Latin Name	Common Name	Wetland Indicator	Dominant
Agrimonia gryposepala	tall agrimony	FACU	No
Agrostis alba	redtop	FACW	No
Asclepias incarnata	swamp milkweed	OBL	No
Cirsium arvense	Canadian thistle	FACU	No
Cornus drummondii	rough-leaf dogwood	FAC	No
Equisetum arvense	field horsetail	FAC	Yes

Latin Name	Common Name	Wetland Indicator	Dominant
Eupatorium perfoliatum	common boneset	FACW+	No
Impatiens capensis	jewel weed	FACW	Yes
Populus deltoides	Eastern cotton-wood	FAC+	No
Rosa arkansana	prairie rose	NI	Yes
Salix exigua	sandbar willow	OBL	Yes
Solidago patula	rough goldenrod	OBL	Yes
Toxicodendron radicans	poison ivy	FAC	No

Wetland A

Wetland A is located at Data Point 8 (DP 8-WetA), approximately one-half mile north of the intersection of SR 794 and Peacock Road. The wetland is approximately 0.22 acre in size and is located along the eastern edge of the investigational area in an old farm lot and is noted as the former location of a barn. This is a predominately emergent wetland.

The ORAM score for this wetland was 13, indicating this wetland is a Category 1. This wetland is within an old farm lot and appears to by hydrologically isolated.

Exhibit 14 Appendix B indicates the location of the wetland. The wetland determination sheet can be found in Appendix C. ORAM forms can be found in Appendix C for Wetland A. Photographs 104-106 seen in Appendix A highlight this wetland. Dominate vegetation noted within this wetland area is noted below.

Latin Name	Common Name	Wetland Indicator	Dominant
Agrostis alba	redtop	FACW	Yes
Carex frankii	Frank's sedge	OBL	No
Carex vulpinoidea	fox sedge	OBL	Yes
Echinochloa crusgalli	barnyard grass	FACU	Yes
Festuca pratensis	meadow fescue	FACU-	Yes
Fraxinus pennsylvanica	Green ash	FACW	No
Juncus tenuis	slender rush	FAC-	No
Phleum pratense	timothy	FACU	Yes
Populus deltoides	Eastern cottonwood	FAC	No
Rumex crispus	curly dock	FACU	Yes
Scirpus torreyi	Torrey's bulrush	OBL	No
Typha latifolia	broad-leaf cattail	OBL	No

Wetland B

Wetland B is located at Data Point 13 (DP13-WetB) along the west side of Peacock Road just before UNT 4 in a residential yard. The wetland is approximately 0.04 acre in size and is a tributary to the UNT 4 to UNT 2 to Mud Creek. The wetland is located on the north side of the driveway just south of UNT 4.

The ORAM score for this wetland was 21, indicating this wetland is a Category 1 Wetland. This wetland is hydrologically connected to UNT 4.

Exhibit 15 Appendix B indicates the location of the wetland. Wetland determination sheets can be found in Appendix C. ORAM forms can be found in Appendix C for Wetland B. Photographs 167-171 in Appendix A highlight Wetland B. Dominate vegetation noted within this wetland area is noted below.

Latin Name	Common Name	Wetland Indicator	Dominant
Carex granularis	meadow sedge	FACW+	No
Festuca pratensis	meadow fescue	FACU-	Yes
Juncus tenuis	slender rush	FAC-	Yes
Poa trivialis	rough bluegrass	FACW	No
Solidago patula	rough-leaf golden-rod	OBL	No
Typha latifolia	broad-leaf cattail	OBL	Yes

Wetland C

Wetland C is located at Data Point 4 (DP 4- Wet C) at the confluence of UNT1 and UNT 3 with UNT 2 to Mud Creek. The wetland occupies approximately 0.01 acre and is located just south of SR 794.

The ORAM score for this wetland was 28, indicating this wetland is a Category 1 Wetland. This wetland is hydrologically connected to UNT 1, UNT 2, and UNT 3 as it is situated at the confluence of these streams.

Exhibit 15 Appendix B indicates the location of this wetland. Wetland determination sheets can be found in Appendix C. ORAM forms for this wetland can be seen in Appendix C. Photographs 27-44 in Appendix A highlight Wetland C. Dominate vegetation noted within this wetland area is noted below.

Latin Name	Common Name	Wetland Indicator	Dominant
Salix exigua	sandbar willow	OBL	No
Lonicera x bella	honeysuckle	FACU-	Yes
Scirpus fluviatilis	river bulrush	OBL	Yes
Impatiens capensis	jewelweed	FACW	Yes
Eupatorium perfoliatum	common boneset	FACW+	Yes
Parthenocissus quinquefolia	virginia creeper	FACU	Yes
Solidago gigantea	giant solidago	FACW	No

Table 5: Hydrologic Connection Analysis of Wetland Resources Associated with the CLA-794-0.60 (PID 78677) Study Area

Wetland ID	Connection	Wetland to Water Body Category Connection	Drainage Sequence to TNW	Photo #
Mill Creek	Adjacent	RPW	Mill Creek Wetland → Mill Creek→ Mad River → Great Miami River	222-227
A	Isolated	Non-RPW	Isolated	104-106
B	Abutting	Non-RPW	Wetland B → UNT 4 → UNT 2→ Mud Run → Mad River → Great Miami River	167-171
C	Adjacent	Non-RPW	Wetland C → UNT 2 → Mud Run → Mad River→ Great Miami River	27-44

IX. Impacts

The realignment of SR 794 north to comply with the DOD clearance standards will impact one wetland and three streams. Preliminary impacts have been determined. Currently, impacts to Mill Creek, UNT 1, and UNT 4 identified within the study limits will be minimal and limited to runoff from the new roadway. Existing culverts at Mill Creek and UNT 5 to Mill Creek will not be replaced during construction, and the roadway will not cross UNT 1 or UNT 4. The existing culvert carrying SR 794 over UNT 2 will be replaced and a new crossing of UNT 5 will be installed. Additionally, UNT 2 will be relocated along SR 794 to accommodate the wider roadway.

The existing culvert carrying SR 794 over UNT 2 will be replaced. This structure is located on UNT 2 to Mud Run just north of the confluence with UNT 1 with UNT 3. A new culvert, similar in size to the existing 72-inch-wide by 42-inch-tall concrete pipe, will be placed to replace the existing culvert. This new culvert will be installed at the same location as the existing culvert and follow approximately the same alignment. This culvert new will be approximately 60 feet in length. Approximately 130 linear feet of this channel is located within the proposed construction limits.

UNT 2 currently serves as the roadside ditch along the south side of SR 794. As part of the proposed widening and relocation of SR 794, it is anticipated approximately 420 linear feet of this channel will be relocated due to widening of the roadway. Approximately 520 linear feet of this channel is located within the proposed construction limits.

A new culvert approximately 60 inches in diameter and approximately 120 feet long will be placed to carry UNT 5 under the relocated SR 794. UNT 5 will be captured by the culvert. New roadside ditches will be placed at all four corners coming into the culvert. UNT 5 is a silt and sand bed intermittent stream with limited aquatic habitat. Disturbance to aquatic species is anticipated to be minimal as the stream does not have sufficient habitat to support aquatic macroinvertebrates and has intermittent flow and cannot sustain permanent populations. Approximately 145 linear feet of this channel is located within the proposed construction limits.

Table 6: Potential Stream Impacts within the CLA-794-0.60 (PID 78677) Construction Limits

Stream Name	Drainage Area (square miles)	Stream Classification	Stream Length (lft)	Stream Impact (lft)	Stream Impact (acre)	Stream (%loss)
Unnamed Tributary 1	0.05	Modified Class II	180	0	0	0
Unnamed Tributary 2	0.69	Modified Class III	1450	420-530	<0.02	29-37
Unnamed Tributary 3	0.06	Modified Class III	415	60-130	<0.006	14-32
Unnamed Tributary 4	0.06	Modified Class II	200	0	0	0
Unnamed Tributary 5	0.17	Modified Class II	460	120-145	<0.01	26-32
Mill Creek	2.88	Warmwater Habitat	730	0	0	0

Impacts to wetlands identified within the study corridor will be minimal. Wetland Areas A, B, and the Mill Creek Wetland are outside of the proposed right-of-way and should not be impacted. Wetland Area C is within the proposed right-of-way upstream of the culvert replacement. Impacts to this wetland would be associated with the replacement of the existing culvert. It is anticipated 0.003 acre of wetland will be impacted.

Table 7: Potential Wetland Impacts within the CLA-794-0.60 (PID 78677) Construction Limits

Wetland ID	Wetland Habitat Types	ORAM Score	ORAM Category	Wetland Area (acre)	Wetland Impact (acre)	Wetland (% loss)
Mill Creek	PSS and PFO	32	1 or 2 gray zone	4.74	0	0
A	PEM	13	1	0.22	0	0
B	PEM	20	1	0.04	0	0

The ODNR Natural Heritage Database located the Upland Piper (*Bartramia longicauda*), a federally threatened species, in an area defined as the 178th Fighter Wing of the Ohio Air National Guard Springfield Base and the Beckley Municipal Airport. However, the bird was not sighted during field investigation. Impacts to the bird's habitat will be minimal since the roadway will be moved away from the bird's core grassland habitat as indicated in Exhibit 11 Appendix B. The reconstruction of existing SR 794 near the bird's core habitat will be on the same alignment as the existing and will not negatively impact the area.

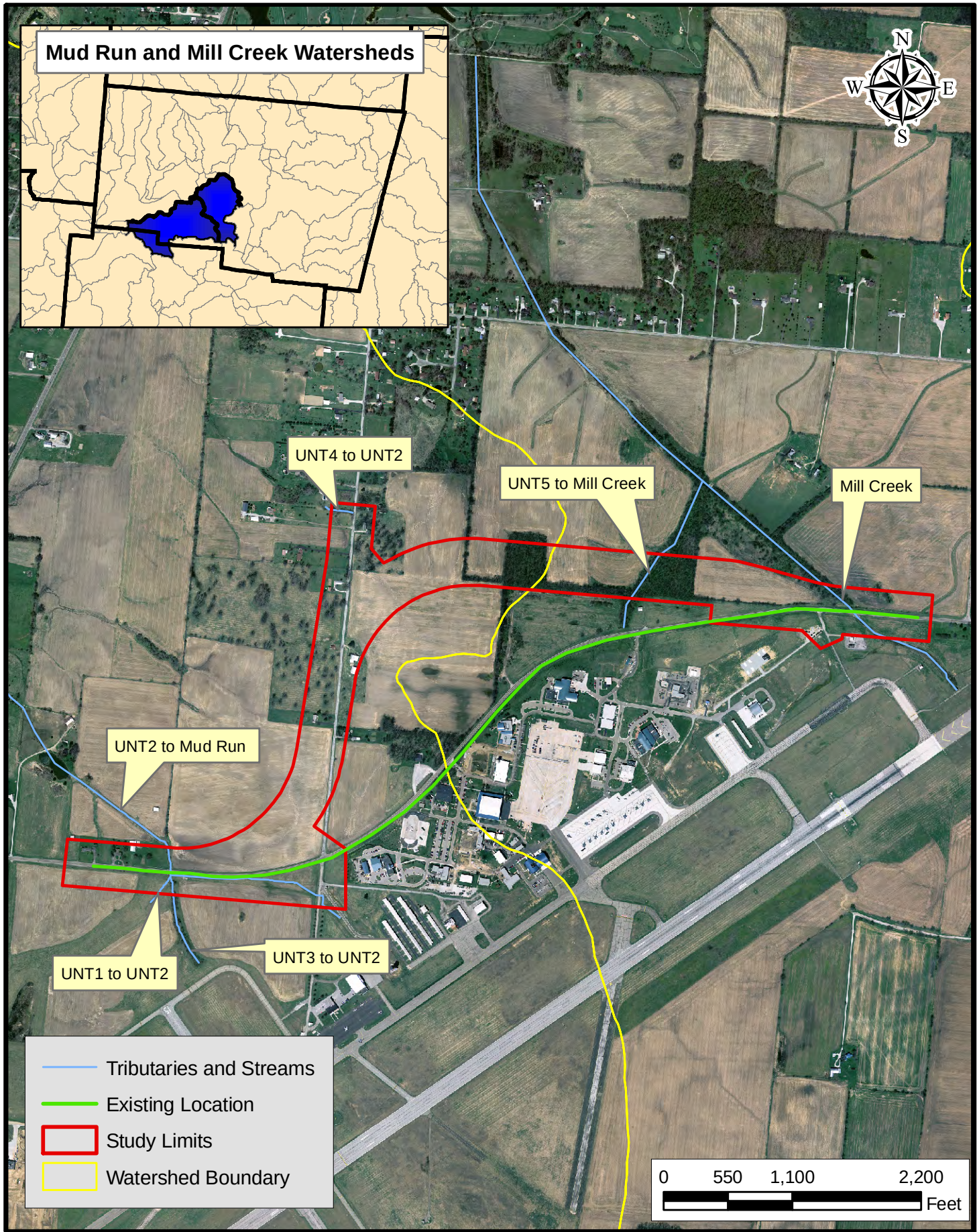
Within the approximate area of the anticipated right-of-way, 17 potential Indiana bat roost trees were noted, and will be removed from within the construction limits. A seasonal ban on tree removal is anticipated to minimize impacts to unknown bat populations.

A preliminary determination of acreage of land-use types within the study corridor was prepared. The dominant land use is agricultural including row crops and pasture. Anticipated ROW will call for the purchase of at least 24.61 acres. The majority of this will come from agricultural lands. See the table below, as well as Exhibit 18 Appendix B.

Table 8: Land Use Impacts of the CLA-794-0.60 (PID 78677) Study Area

Habitat Type	Acres within Study Area	Impacted Acres	% Loss
Row Crop	79.8	17.52	22
Pasture	5.97	1.1	18
Grassland/Herbaceous	4.61	1.49	32
Deciduos Forest	10	4.81	48
Woody Wetland	0.44	0	0
Emergent Wetland	0.22	0	0
Scrub/Shrub	0.4	0.21	53
Low Intensity Development	6.08	0.49	8
Medium Intensity Development	8.44	0.53	6
Transportation*	4.53	3.92	87

*Existing Road that will be used in the proposed project should not be considered an impact



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AMERICAN STRUCTUREPOINT INC.

www.structurepoint.com

Project Tributaries Mapping

Applicant:

Clark County Engineer
4075 Laybourne Road
Springfield, Ohio 45505

CLA-794-0.60
PID 78677
Location: Springfield
Township: Springfield
County: Clark
State: Ohio

Date: 07/21/2009

CO20080156\D.Drawings\Environmental\ArcView\Exhibits\CO20080156.EV.2009-07-21.Wetland_Map.jdi.mxd

AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

Wetland Mapping

Applicant: Clark County Engineer
4075 Laybourne Road
Springfield, Ohio 45505

CLA- 794-0.60
PID 78677

Location: Springfield
Township: Springfield
County: Clark
State: Ohio

Date: 07/21/2009

Attachment F-17

Ohio Department of Transportation
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Sean D. Logan, Director, ODNR DATE: 14 December 2009
Attn: Brian Mitch, Assistant Environmental Administrator

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Ecological Coordination

PROJECT: CLA-794-0.60 (PID 78677)

Enclosed for your review is an ecological survey report for a proposed project located in Clark County, which involves the realignment of SR 794 further north of the Springfield, Ohio Air Nation Guard Base and Beckley Municipal Airport.

As proposed, the realignment of SR 794 project will not affect wetlands. Within the project construction limits, are three headwater streams that will be impacted. Based on HHEI evaluations, two streams are Modified Class 3 and one is a Modified Class 2 stream. Anticipated impacts to Modified Class 3 steams include; Unnamed tributary 2 - 460 linear feet, Unnamed tributary 3 - 60 linear feet, and the Modified Class 2 Stream, Unnamed tributary 5 - 120 linear feet. Terrestrial impacts associated with the project include approximately 4.81 acres of forested habitat, 0.21 acres of scrub/shrub habitat, 1.1 acres of pasture, 17.52 acres of row crop.

ODNR Natural Heritage Database revealed the presence of one known Ohio threatened species, the upland sandpiper (*Bartramia longicauda*). The project is not expected to impact the species or its habitat.

Your concurrence and/or comments on the project would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns, contact John Baird, Environmental Specialist at (614) 466-1913.

TMH:WRC:jrb
Enclosures

c: Tricia Bishop, D-7 - File - Reading File

OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

TED STRICKLAND, GOVERNOR • JOLENE M. MOLITORIS, DIRECTOR

December 15, 2009
Mary Knapp, Supervisor
U.S. Fish and Wildlife Service
6950-H Americana Parkway
Reynoldsburg, Ohio 43068

Re: CLA-794-0.60 (PID 78677)
Ecological Coordination

Dr. Knapp:

Attached for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), is an ecological survey report for a proposed project located in Clark County. The project involves the realignment of SR 794 further north of the Springfield, Ohio Air Nation Guard Base and Beckley Municipal Airport.

As proposed, the realignment of SR 794 project will not affect wetlands. Within the project construction limits, are three headwater streams that will be impacted. Based on HHEI evaluations, two streams are Modified Class 3 and one is a Modified Class 2 stream. Anticipated impacts to Modified Class 3 steams include; Unnamed tributary 2 - 460 linear feet, Unnamed tributary 3 - 60 linear feet, and the Modified Class 2 Stream, Unnamed tributary 5 - 120 linear feet. Terrestrial impacts associated with the project include approximately 4.81 acres of forested habitat, 0.21 acres of scrub/shrub habitat, 1.1 acres of pasture, 17.52 acres of row crop.

Clark County is within the known or historic range of the federally endangered Indiana bat (*Myotis sodalis,* **E**), Eastern Prairie Fringed Orchid (*Platanthera leucophaeae*, **T**) and the federal candidate eastern massasauga rattlesnake (*Sistrusus catenatus,* **C**). None of these species, nor any other wildlife on the Federal endangered/threatened species list, were identified within the project area during the field survey.

Eastern Prairie Fringed Orchid
No suitable habitat was found, so it is expected that the proposed project will have **no effect** on the species.

Eastern massasauga rattlesnake
While no comprehensive survey was conducted for the **eastern massasauga rattlesnake** within the study area, the species is know to inhabit wet areas (including wet prairies, marshes, and low areas along rivers and lakes) during the spring and fall and sparsely vegetated dry upland areas in the summer. Since no known populations of the snake have been identified near the project area, and the potentially suitable habitat for the snake found within the project area has been previously disturbed, it is expected that the proposed project will have **no effect** on the species.

Tricia Bishop

Indian bat

The Indiana bat is the only federal or state listed species that may be impacted by this proposed roadway project. Although no potential winter hibernacula sites were found, trees characteristic of summer roosting or brood-rearing habitat (living or standing dead trees or snags with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities) were present. Based on preliminary plans, the project would result in the removal of 17 trees with potential roost habitat. Because the trees will be removed during the appropriate season, no direct take of Indiana bats is expected. A large amount of woods containing many suitable roost trees surrounds this site.

Determination:

The proposed action May Adversely Affect the Indiana bat, and is Likely to Adversely Affect this species. All of the anticipated effects of this project on the Indiana bat are similar to those described in the Programmatic BO.

Conservation Measures:

ODOT will implement the following conservation measures to avoid and/or minimize adverse impacts on the Indiana bat:

A-1. To avoid direct take of bats, potential roost trees will be cleared only between 1 September and 30 April.

ODOT will implement the following conservation measures to mitigate any adverse impacts to the Indiana bat:

M-6 (a). Big Darby Creek research bank.

If a listed or proposed species is subsequently found to occur in the project area, the Federal Highway Administration will initiate coordination with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended.

Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have questions or concerns, contact John Baird, Environmental Specialist at (614) 466-1913.

Respectfully,

Timothy M. Hill for
Administrator
Office of Environmental Services

TMH:WRC:jrb
Enclosure

c: Tricia Bishop, D-7 - File - Reading File

Indiana Bat Ohio Habitat Assessment Form (OHAF) for ODOT/USFWS use only
to be used in conjunction with Indiana bat Programmatic Consultation, July 2006

Project Name/Number: CLA-794-0.60 PID 78677

Prepared By: John Baird **Date of Assessment:** 12-15-09

Lat/Long coordinates approx. center of project: Decimal degrees, 5 decimal places (example 42.78963)

Latitude: 39.847996 **Longitude:** -83.846481

Indiana bat Management Unit that Project primarily occurs in: (W unit) S unit C unit E unit NE unit

Section 1 (Programmatic Consultation Tier 1)
to be used in conjunction with Indiana bat Programmatic Consultation, July 2006

1. Will any portion of project occur outside of the defined urban areas (GIS layer)?

☐ NO Project will have NO EFFECT on the Indiana bat and documentation filed at ODOT

☒ YES Continue to #2.

2. Will any portion of project occur within 0.5 mile of a known or suspected hibernaculum?

☒ NO Continue to #3

☐ YES Project MAY AFFECT the Indiana bat, follow Conservation Measure A-3 (Send Documentation to USFWS) and continue to #3

3. Will project clear any potential Indiana bat roost trees?

Roost trees are living trees (>8 inch dbh), standing dead trees or snags (trees with less than 10% live canopy) with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities.

☐ NO Project will have NO EFFECT on the Indiana bat, documentation filed at ODOT (Unless answered yes on #2, then Project MAY AFFECT the Indiana bat, follow Conservation Measure A-3 (Send Documentation to USFWS) and continue to #4);

☒ YES Project MAY AFFECT the Indiana bat, continue to #5

4. Is the project within 5 miles of a known hibernaculum?

☒ No Continue to #5.

☐ Yes Project LIKELY TO AFFECT the Indiana bat, Continue to Tier 2 (Section 2: Part One)

5. Is the project located between 5 and 10 miles of a hibernaculum?

☒ No Continue to #6.

☐ Yes Project MAY AFFECT the Indiana bat, follow Conservation Measure A-2 (Send Documentation to USFWS) Continue to #6.

6. Are all of the potential roost trees isolated?

☒ NO Continue to #7

☐ YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, send this OHAF documentation to USFWS for concurrence (seasonal cutting required if impacts do not meet PC1-a or PC1-b, or if any isolated maternity roost trees are being removed)

7. Are any of the identified potential roost trees potential maternity roost trees?
(Trees >16 inch dbh, with some solar exposure; if not known, assume yes)

[X] NO Continue to #9

[ ] YES Continue to #8

8. Are all of the identified potential maternity roost trees isolated?

[ ] No Project LIKELY TO AFFECT the Indiana bat, Continue to Tier 2 (Section 2; Part one)

[ ] YES Continue to #9.

9. Will project occur in W or C management unit?

[ ] NO Continue to #10

[X] YES Skip 10 & 11, continue to #12

10. Will project remove more than 20 potential roost trees?

[ ] NO Total Number of Trees [ ] Continue to #11

[ ] YES Project LIKELY TO AFFECT the Indiana bat, Continue to Tier 2 (Section 2; Part One)

11. Will project occur within 5 miles of an Indiana bat capture record (including hibernacula records)?

[X] NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF & project documentation to USFWS for concurrence.

[ ] YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF & project documentation to USFWS and follow Conservation Measure A-1

12. Will project remove more than 10 potential roost trees?

go to Page 4

[ ] NO Total Number of Trees [ ] Continue to #13

[X] YES Project LIKELY TO aEFFECT the Indiana bat, Continue to Tier 2 (Section 2; Part One)

13. Will project occur within 5 miles of an Indiana bat capture record (including hibernacula records)?

[ ] NO Continue to #14

[ ] YES Skip #14 & #15, Continue to #16.

14. Is the project area (that contains the potential roost trees) within a forest area of less than 100 acres, or connected to a forest area of less than 100 acres via a tree line (row of trees 2 or more wide)?

[ ] NO Continue to #15

[ ] YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF documentation to USFWS for concurrence.

15. Is there a perennial water source within 0.5 mile of potential roost trees (that are within a forest area of more than 100 acres)?

[ ] NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF documentation to USFWS for concurrence.

[ ] YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF documentation to USFWS for concurrence; follow Conservation Measure A-1

16. Will project occur in W management unit?

☐ NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF documentation to USFWS for concurrence; follow Conservation Measure A-1

☐ YES Continue to #17

17. Is the project area (that contains the potential roost trees) within a forest area of less than 100 acres, or connected to a forest area of less than 100 acres via a tree line (row of trees 2 or more wide)?

☐ NO Skip #18, Continue to #19

☐ YES Continue to #18

18. Will the project remove all, or a portion of, a potential Indiana bat travel corridor?

☐ NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF documentation to USFWS for concurrence; follow Conservation Measure A-1

☐ YES Project LIKELY TO AFFECT the Indiana batContinue to Tier 2 (Section 2; Part One)

19. Will the project remove more than 10% of the forest area it is within (or connected to)?

☐ NO Continue to #20

☐ YES Project LIKELY TO AFFECT Indian bat, Continue to Tier 2 (Section 2; Part One)

20. Will the project remove all, or a portion of, a potential Indiana bat travel corridor?

☐ NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, Submit OHAF and/or NLAA documentation to USFWS for concurrence; follow Conservation Measure A-1

☐ YES Project LIKELY TO EFFECT Indian bat, Continue to Tier 2 (Section 2; Part One)

December 3, 2007 TW, AZ, USFWS & ODOT

Section 2 (Programmatic Consultation Tier 2)
Indiana Bat Ohio Habitat Assessment Form (OHAF) for ODOT/USFWS use only
to be used in conjunction with Indiana bat Programmatic Consultation, July 2006

Part 1

Option 1: Assume presence (higher take in S, E, NE units)

☐ NO Continue to #2 or #3

☒ YES LIKELY TO ADVERSELY AFFECT; Submit Tier 2 information to USFWS and follow applicable seasonal tree cutting date restrictions. If seasonal cutting dates can not be followed and the project only involves the removal of potential roost trees and isolated potential maternity roost trees, request incidental take through Tier 2 submission. Follow Conservation Measures in PC to minimize adverse effects and mitigate by Management Unit (acre to acre). If seasonal cutting dates can not be followed and the project involves the removal of any non-isolated maternity roost trees, must answer no to Option #1 and continue with Options #2 and/or #3.

Option 2: Conduct emergence survey (one or few trees). Were bats observed during the survey?

☐ NO MAY AFFECT NOT LIKELY TO ADVERSELY AFFECT; Submit Tier 2 information to USFWS and if in S, E, or NE units, follow seasonal tree cutting dates. No seasonal cutting restrictions necessary in W or C units (unless otherwise noted in Tier 1). If appropriate seasonal cutting dates can not be followed request incidental take through Tier 2 submission.

☐ YES Choose Option # 1 or Option # 3 (if the seasonal tree cutting date restrictions can not be followed and the project will involve the removal of any non-isolated potential maternity roost trees, Option # 3 must be selected).

Option 3: Conduct mist net survey (in coordination with USFWS). Were Indiana bats caught during the survey?

☐ NO MAY AFFECT NOT LIKELY TO ADVERSELY AFFECT; Submit Tier 2 information to USFWS and if in S, E, or NE units, follow seasonal tree cutting dates. No seasonal cutting restrictions necessary in W or C units (unless otherwise noted in Tier 1). If appropriate seasonal cutting dates can not be followed request incidental take through Tier 2 submission.

☐ YES LIKELY TO ADVERSELY AFFECT; Continue to Part 2

Part 2

1. Are Indiana bats caught that show signs of reproduction? (Female and juvenile Indiana bats only)

☐ NO Submit Tier 2 information, send to USFWS with the following conservation measures applied from the PC: A-1, and one or more of measures M-1, M-2, M-3, and M-4.

☐ YES Coordinate with USFWS to choose measures that would be appropriate for minimizing harm to the maternity colony.

December 11, 2006 TW, AZ, USFWS & ODOT

Ohio Department of Transportation
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Ric Queen, OEPA - DSW **DATE:** December 14, 2009

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Pre-application Coordination

PROJECT: CLA-794-0.60 (PID 78677)

Enclosed for your review is an ecological survey report for a proposed project located in Clark County, which involves the realignment of SR 794 further north of the Springfield, Ohio Air Nation Guard Base and Beckley Municipal Airport.

As proposed, the realignment of SR 794 project will not affect wetlands. Within the project construction limits, are three headwater streams that will be impacted. Based on HHEI evaluations, two streams are Modified Class 3 and one is a Modified Class 2 stream.

Anticipated impacts:

- Modified Class 3 steams
  - Unnamed tributary 2 - 460 linear feet
  - Unnamed tributary 3 - 60 linear feet
- Modified Class 2 Stream
  - Unnamed tributary 5 - 120 linear feet

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have, questions or concerns contact John Baird, Environmental Specialist at (614) 466-1913.

TMH:WRC:jrb
Enclosure

c: Tricia Bishop, D- 7 - File - Reading File

OHIO DEPARTMENT OF TRANSPORTATION

Division of Planning, Office of Environmental Services
1980 West Broad Street, Columbus, Ohio 43223

December 14, 2009

U.S. Army Corps of Engineers
Ohio Regulatory Transportation Office
Building 10 Section 10
3990 E. Broad St.
Columbus, OH 43218

Attention: Peter Clingan, Team Leader
Re: CLA-794-0.60 (PID 78677)
Ecological Coordination (Pre-application Coordination)

Dear Mr. Clingan:

Enclosed for your review is an ecological survey report for a proposed project located in Clark County, which involves the realignment of SR 794 further north of the Springfield, Ohio Air Nation Guard Base and Beckley Municipal Airport.

As proposed, the realignment of SR 794 project will not affect wetlands. Within the project construction limits, are three headwater streams that will be impacted. Based on HHEI evaluations, two streams are Modified Class 3 and one is a Modified Class 2 stream.

Anticipated impacts:

- Modified Class 3 steams
  - Unnamed tributary 2 - 460 linear feet
  - Unnamed tributary 3 - 60 linear feet
- Modified Class 2 Stream
  - Unnamed tributary 5 - 120 linear feet

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments, including a **jurisdictional determination** of Waters of the U.S. within the construction limits, would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have questions or concerns contact John Baird, Environmental Specialist, at (614) 466-1913.

Respectfully,

Timothy M. Hill for
Administrator
Office of Environmental Services

TMH:WRC:jrb
Enclosure

c: Tricia Bishop, D- 7 - File - Reading File

Tricia Bishop/Planning/D07/ODOT
01/15/2010 12:32 PM

To
cc
bcc
Subject Fw: 09-0472; ODOT EC CLA-794-0.60 (PID 78677)

"Mitch, Brian" <Brian.Mitch@dnr.state.oh.us>
01/15/2010 10:59 AM

To <tim.hill@dot.state.oh.us>
cc <Mike.Pettegrew@dot.state.oh.us>, <john.baird@dot.state.oh.us>
Subject 09-0472; ODOT EC CLA-794-0.60 (PID 78677)

ODNR COMMENTS TO Timothy M. Hill, ODOT Office of Environmental Services, 1980 West Broad Street, Columbus, Ohio 43223

Project: The project involves the realignment of SR 794 further north of the Springfield, Ohio Air Nation Guard Base and Beckley Municipal Airport.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Rare and Endangered Species: The ODNR, Division of Natural Areas and Preserves, has the following comments.

Our Heritage Data Report is included in the project documentation as Appendix D. We had one species to report, the Upland Sandpiper (*Bartramia longicauda*), threatened. This species is discussed on page 21 under the "Impacts"

section. It is stated in this section that this bird is listed as federally threatened, but it is not. It is a state threatened species.

We have no new or additional data to report.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The ODNR, Division of Wildlife (DOW) has the following comments.

The DOW recommends mitigation is provided, as necessary, for the proposed stream impacts and any wetland impacts that may occur as a result of this project.

As indicated in the information provided, the project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniosa*), Bitternut hickory (*Carya cordiformis),* Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (Populus deltoides), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, these trees must be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between September 30 and April 1. If suitable trees must be cut during the summer months of April 2 to September 29, a net survey must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The Natural Heritage Database has a record near the project area for the upland sandpiper (*Bartramia longicauda*), a state threatened species. Due to the status of this species, the project is not likely to impact this species.

ODNR appreciates the opportunity to provide these comments. Please contact Brian Mitch at (614) 265-6378 if you have questions about these comments or need additional information.

Brian Mitch, Environmental Review Manager

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994

January 26, 2010

Timothy M. Hill
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, OH 43216-0899

TAILS: 31420-2010-F-0258 (PID 78677)

Attn: John Baird
Bill Cody
RE: **CLA-794-0.60 (PID 78677)**

Dear Mr. Hill:

This letter is in response to your December 15, 2009 request for site-specific review pursuant to section 7 of the Endangered Species Act of 1973, as amended, received in our office on December 17, 2009, regarding the realignment of SR-794 in Clark County, Ohio. The project, as proposed, will relocate SR-794 further north of the Air National Guard Base and Beckley Municipal Airport in Springfield. The project will also include the construction of one new culvert, replacement of an existing culvert, and relocation of a portion of one channel. We understand that the project will require 24.61 acres of permanent right-of-way and will result in impacts of up to 805 linear feet of streams (in two unnamed tributaries to Mud Run and one unnamed tributary to Mill Creek) and 0.003 acre of wetland. In addition, 17 suitable Indiana bat roost trees may be removed for the project.

FEDERALLY LISTED SPECIES:
The project is located within the range of the Federally Endangered Indiana bat (*Myotis sodalis*); the Federally Threatened eastern prairie fringed orchid (*Platanthera leucophaea*); and the Federal Candidate Species eastern massasauga (*Sistrurus catenatus catenatus)*.

ODOT has determined that this project will have *no effect* on the **eastern prairie fringed orchid** and **eastern massasauga**; therefore, these species are not expected to be impacted by the project.

ODOT has determined that this project *may affect and is likely to adversely affect* the **Indiana bat**. The remainder of this letter addresses impacts to this species.

INDIANA BAT - TIER 2 BIOLOGICAL OPINION:
On January 26, 2007, the U.S. Fish and Wildlife Service (Service) issued a programmatic biological opinion (PBO) for the Ohio Department of Transportation's (ODOT) Statewide Transportation Program through January 2012. This PBO established a two-tiered consultation process for ODOT activities, with issuance of the programmatic opinion being Tier 1 and all subsequent site-specific project analyses constituting Tier 2 consultations. Under this tiered process, the Service will produce tiered biological

opinions when it is determined that site-specific projects are likely to adversely affect federally listed species. When *may affect, not likely to adversely affect* determinations are made, the Service will review those projects and if justified, provide written concurrence and section 7(a)(2) consultation will be considered completed for those site-specific projects.

In issuing the PBO (Tier 1 biological opinion), we evaluated the effects of all ODOT actions outlined in your Biological Assessment on the federally listed Indiana bat. Your current request for Service review of the SR-794 realignment project is a Tier 2 consultation under the January 26, 2007, PBO. We have reviewed the information contained in the letter and supporting materials submitted by your office describing the effects of the proposed project on federally listed species. We concur with your determination that the action is *likely to adversely affect* the Indiana bat. As such, this review focuses on determining whether: (1) this proposed site-specific project falls within the scope of the Tier 1 PBO, (2) the effects of this proposed action are consistent with those anticipated in the Tier 1 PBO, and (3) the appropriate conservation and mitigation measures identified in the biological assessment are adhered to.

That is, this letter serves as the Tier 2 biological opinion for the proposed SR-794 realignment project. As such, this letter also provides the level of incidental take that is anticipated and a cumulative tally of incidental take that has been authorized and exempted in the PBO.

Description of the Proposed Action

Pages 1-2 of your letter, along with the December 2009 Level One Ecological Report you submitted, include the location and a thorough description of the proposed action. The action, as proposed, involves the realignment of SR-794 to a location further north of the Air National Guard Base and Beckley Municipal Airport in Springfield, Ohio. The purpose of this project is to relocate a section of SR-794 away from the 178th Fighter Wing of the Ohio Air National Guard Springfield Base and the Beckley Municipal Airport to comply with Department of Defense clearance requirements and to allow for anticipated future air-base growth in the area. Seventeen trees that exhibit suitable summer roost habitat characteristics for the Indiana bat will be removed for the project. ODOT will implement the following conservation measures to avoid, minimize, and/or mitigate adverse impacts to the Indiana bat: 1) any unavoidable tree removal will take place between September 30 and April 1 to avoid direct impacts (avoidance measure A-1), and 2) credit for the Indiana bat summer ecology study (Gehrt/Swanson, 2008-2010) will be applied to mitigate adverse impacts to the bat (mitigation measure M-6). **The Service appreciates ODOT's use of the revised tree clearing dates of September 30 and April 1.**

Status of the Species

Species description, distribution, life history, population dynamics, and status are fully described on pages 13-26 for the Indiana bat in the PBO and are hereby incorporated by reference. Since the issuance of the PBO in 2007, there has been no change in the status of the species.

Species descriptions, life histories, population dynamics, status and distributions are fully described on pages 23-30 for the Indiana bat in the PBO and are hereby incorporated by reference. The most recent population estimate indicates 468,184 Indiana bats occur rangewide (King 2008). The current revised Indiana Bat Recovery Plan: First Revision (2007) delineates recovery units based on population discreteness, differences in population trends, and broad level differences in land-use and macrohabitats. There are currently four recovery units for the Indiana bat: Ozark-Central, Midwest, Appalachian Mountains, and Northeast. All of Ohio falls within the Midwest Recovery Unit.

In 2007, white nose syndrome (WNS) was found to fatally affect several species of bats, including the Indiana bat in eastern hibernacula. To date, WNS is known from New York, Massachusetts, Vermont, West Virginia, Pennsylvania, New Jersey, New Hampshire, Connecticut, and Virginia. Roughly 70,000 Indiana bats, approximately 15% of the total population, occur in the affected states and are vulnerable to

WNS at this time. The extent of the impact this syndrome may have on the species rangewide is uncertain but based on our current limited understanding of WNS, we expect mortality of bats at affected sites to be high (personal communication, L. Pruitt, 2008).

Environmental Baseline

The environmental baseline for the species listed above was fully described on pages 21-26 of the PBO and is hereby incorporated by reference. Since the issuance of the PBO in 2007, there has been no change in the environmental baseline.

Status of the species within the action area

Since the issuance of the PBO in 2007, there have been no new Indiana bat capture records within the vicinity of this project. Your letter and supporting materials state that suitable habitat exists within the action area, thus we are assuming presence.

Effects of the Action

Based on analysis of the information provided in your letter and supporting materials, we have determined that the effects of the proposed action are consistent with those contemplated and fully described on pages 31-35 of the PBO. Adverse effects to the Indiana bat from this project could occur due to the removal of 4.81 acres of wooded habitat, including 17 potential roost trees. As no trees exhibiting characteristics of maternity roost habitat will be removed for the project, the Service anticipates that any effects on an extant maternity colony will be insignificant. In addition, implementation of seasonal cutting restrictions will avoid direct adverse effects to individual bats. **However, photos included in the December 2009 Level One Ecological Report you submitted indicate the presence of several large dead or dying trees in the project area. These trees exhibit high-quality Indiana bat roosting habitat with potential to become suitable maternity colony roost sites in the near future. Due to the relative paucity of wooded habitat in the West Management Unit (as delineated in the PBO), the Service recommends that these trees be saved wherever possible.**

Adult male and non-reproductive female Indiana bats may be indirectly exposed to loss of roosting habitat. In general, effects on these individual bats would be less severe than the effects associated with individuals of maternity colonies. Adult male and non-reproductive female Indiana bats are not subject to the physiological demands of pregnancy and rearing young.

Males and non-reproductive females typically roost alone or occasionally in small groups. When these individuals are displaced from roosts they must utilize alternative roosts or seek out new roosts. Because these individuals are not functioning as members of maternity colonies, they do not face the challenge of reforming as a colony. Roost tree requirements for non-reproductive Indiana bats are less specific whereas maternity colonies generally require larger roost trees to accommodate multiple members of a colony. Therefore, it is anticipated that adverse indirect effects to non-reproductive bats will be less than the effects to reproductively active females. The Service anticipates that indirect effects to non-reproductive Indiana bats from the loss of roosting habitat will be insignificant.

In addition, scientific research on the Indiana bat that is funded by ODOT (mitigation measure M-6) promises to enhance our knowledge of Indiana bat maternity colony behavior relative to roosting, foraging, and rearing of offspring in the central-Ohio region. The study will also estimate the proportion of colony residents that survive, reproduce, and return to the colony among successive years. These findings will refine our understanding of maternity colony site fidelity and its associated effects on reproduction and survival, as described above.

We are not aware of any non-federal actions in the action area that are reasonably certain to occur. Thus, we do not anticipate any cumulative effects associated with this project.

Conclusion

We believe the proposed SR-794 realignment project is consistent with the PBO. After reviewing site specific information, including 1) the scope of the project, 2) the environmental baseline, 3) the status of the Indiana bat and its assumed presence within the project area, 4) the effects of the action, and 5) any cumulative effects, it is the Service's biological opinion that this project is *not likely to jeopardize* the continued existence of the Indiana bat.

Incidental Take Statement

The Service anticipates that the proposed action will result in incidental take associated with projects in the West management unit. Incidental take for this project is approximately 4.81 acres, resulting in the cumulative incidental take of 84.95 for this management unit. This project, added to the cumulative total of incidental take for the implementation of ODOT's Statewide Transportation Program, is well within the level of incidental take anticipated in the PBO through 2012 (see table below).

Management Unit	**IT anticipated in PBO**	**IT for this project**	**Cumulative IT granted to date**
West	1,565 acres	4.81 acres	84.95 acres
Central	2,280 acres	0 acres	27.50 acres
Northeast	4,679 acres	0 acres	141.00 acres
East	6,370 acres	0 acres	58.74 acres
South	7,224 acres	0 acres	52.09 acres
Statewide	22,118 acres	4.81 acres	364.28 acres

We determined that this level of anticipated and exempted take of Indiana bats from the proposed project, in conjunction with the other actions taken by ODOT pursuant to the PBO to date, is *not likely to result in jeopardy* to the species.

We understand that ODOT is implementing all pertinent Indiana bat conservation measures, specifically A-1 and M-6 stipulated in the Biological Assessment on pages 29-31. In addition, ODOT is monitoring the extent of incidental take that occurs on a project-by-project basis. These measures will minimize the impact of the anticipated incidental take.

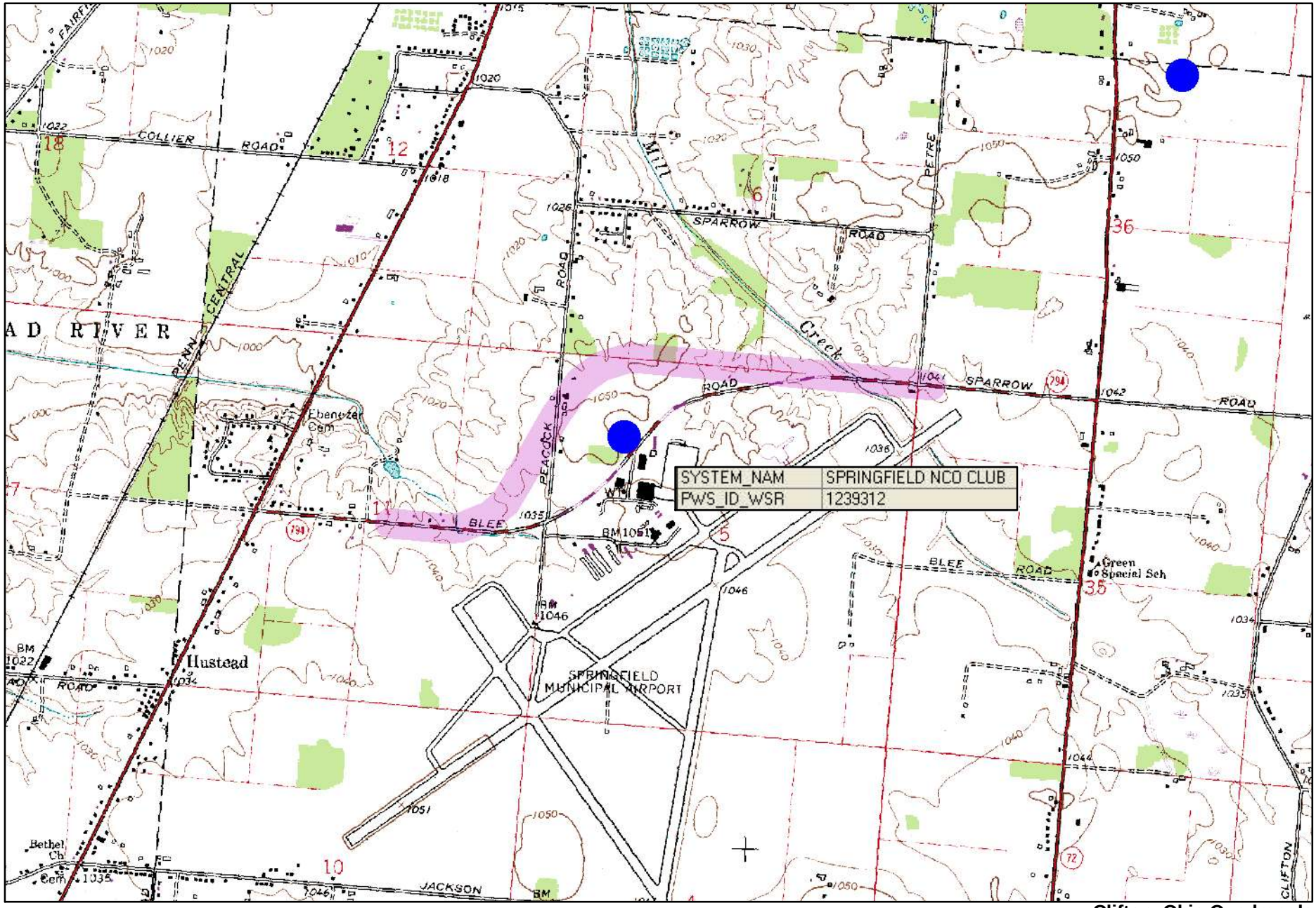
This fulfills your section 7(a)(2) requirements for this action. However, should the proposed project be modified or the level of take identified above be exceeded, ODOT should promptly reinitiate consultation as outlined in 50 CFR §402.16. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the continued implementation of ODOT's Statewide Transportation Program and projects predicated upon it may affect listed species in a manner or to an extent not considered in this opinion; (3) the continued implementation of ODOT's Statewide Transportation Program and projects predicated upon it are subsequently modified in a manner that cause an effect to federally listed species not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease, pending reinitiation. Requests for reinitiation, or questions regarding reinitiation, should be directed to the U.S. Fish Wildlife Service's Columbus, Ohio Field Office.

We appreciate your continued efforts to ensure that this project is consistent with all provisions outlined in the Biological Assessment and PBO. If you have any questions regarding our response or if you need additional information, please contact Karen Hallberg at extension 23.

Sincerely,

for Mary Knapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH
Ohio Regulatory Transportation Office, Columbus, OH (*email only*)
OEPA, Columbus, OH (*email only*)



Clifton, Ohio Quadrangle

CLA-SR 794-00.60
PID 78677

Public Water Supply

Source Water Protection Area

Sole Source Aquifer

Water Well Log
Select A Road

Search for All Roads within CLARK county

Ground Water

About Ground Water
Contacts & Phone Numbers
Publications of this Program

Mapping
Potentiometric Surface Maps
Statewide Aquifer Maps
Pollution Potential Maps
Ground Water Resources Maps

Technical Services
Well Log Filing
Well Log Searches
Request an Off-line Well Log Search
Well Log Computerization Plans
Nonpoint Source Pollution Investigations
Evaluation of Ground Water Availability
Special Investigation Services
Ground Water Conflict Resolution & Investigations

Driller Liaison Program
Ohio Law Related to this Program
Links to Related Sites

Select a Well Log from the list below.

- Address, Original Owners Name, Well Log Number

1 794, OHIO AIR NATIONAL GUARD, 981130
1 794, OHIO AIR NATIONAL GUARD, 981131
1 794, OHIO AIR NATIONAL GUARD, 981132
1 794, OHIO AIR NATIONAL GUARD, 981133
1 794, OHIO AIR NATIONAL GUARD, 981134
1 794, OHIO AIR NATIONAL GUARD, 981135
1 794, OHIO AIR NATIONAL GUARD, 981136
1 794, OHIO AIR NATIONAL GUARD, 981137
794, CORP OF ENGINEERS, 108468
794, CITY OF SPRINGFIELD, 246343
794, CITY OF SPRINGFIELD, 433728
794, SPRINGFIELD ANGB, 937822
794, SPRINGFIELD ANGB, 937823
794, SPRINGFIELD ANGB, 937824
794, SPRINGFIELD ANGB, 937825
794, SPRINGFIELD ANGB, 976526
794, SPRINGFIELD ANGB, 976527
794, SPRINGFIELD ANGB, 976528
794, SPRINGFIELD ANGB, 976529
794, SPRINGFIELD ANLB, 976530

Water Well Log
Select A Road

Search for All Roads within CLARK county

Ground Water

About Ground Water
Contacts & Phone Numbers
Publications of this Program

Mapping
Potentiometric Surface Maps
Statewide Aquifer Maps
Pollution Potential Maps
Ground Water Resources Maps

Technical Services
Well Log Filing
Well Log Searches
Request an Off-line Well Log Search
Well Log Computerization Plans
Nonpoint Source Pollution Investigations
Evaluation of Ground Water Availability
Special Investigation Services
Ground Water Conflict Resolution & Investigations

Driller Liaison Program
Ohio Law Related to this Program
Links to Related Sites

Select a Well Log from the list below.

- Address, Original Owners Name, Well Log Number

617 BLEE, EVERETT BLEVINS, 825111
625 BLEE, JUANITA MORGAN, 2012396
877 BLEE, TLW, 990786
917 BLEE, TLW BUILDERS, 2008565
951 BLEE, DAVE TABORN, 999339
1036 BLEE, DALE HUTTEN, 655961
1461 BLEE, CLIFFORD HUNTER, 628608
1461 BLEE, CIFFORD HUNTER, 646323
1814 BLEE, GENE FOLCK, 642461
1870 BLEE, DON ALSPAUIGH, 447370
2020 BLEE, TIM FOLCK, 803821
2110 BLEE, ALBERT HESS, 733090
2111 BLEE, HAROLD MOYER, 485929
BLEE, SPRINGFIELD AIRPORT, 43360
BLEE, WATER RESOURCES BOAR, 48655
BLEE, JOHN FORLEK, 62942
BLEE, PAUL NEWKIRK, 63764
BLEE, MELVIN STABLER, 63799
BLEE, WN KOHL, 166162
BLEE, L ELLCESSOR, 183416
BLEE, JOHN FRUT, 273974
BLEE, BEACON AIRWAYS, 360913
BLEE, N.C.O. CLUB, 405319

Search for All Roads within CLARK county

Water Well Log
Select A Road

Ground Water

About Ground Water
Contacts & Phone Numbers
Publications of this Program

Mapping
Potentiometric Surface Maps
Statewide Aquifer Maps
Pollution Potential Maps
Ground Water Resources Maps

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Well Log Computerization Plans
Nonpoint Source Pollution Investigations
Evaluation of Ground Water Availability
Special Investigation Services
Ground Water Conflict Resolution & Investigations

Driller Liaison Program
Ohio Law Related to this Program
Links to Related Sites

Select a Well Log from the list below.

- Address, Original Owners Name, Well Log Number

4625 PEACOCK, DOUG SEE, 872570
4644 PEACOCK, PAUL HOWELL, 804291
4676 PEACOCK, GLEN DEHART , 916101
4677 PEACOCK, STEVE EUBANK, 865340
4725 PEACOCK, COUNTRY CLASS BUILDE, 770440
4755 PEACOCK, CINDY BURCHAM, 761783
4820 PEACOCK, DOUG STEVENSON, 691667
4825 PEACOCK, DUDLEY/LOIS BRAVARD, 657964
4863 PEACOCK, LOWELL ROSS, 360924
4887 PEACOCK, CJROS WODEMER, 930295
4901 PEACOCK, DOUGLAS SEC, 715596
4995 PEACOCK, BEN GOOLSBY, 657958
PEACOCK, J SPROUSE, 131073
PEACOCK, EARL LENER, 174153
PEACOCK, EARL TENER, 174154
PEACOCK, H BUSSERT, 174166
PEACOCK, EARL TENER, 174185
PEACOCK, JACK LYONS, 360947

Search for All Roads within CLARK county

Ground Water

About Ground Water
Contacts & Phone Numbers
Publications of this Program

Mapping
Potentiometric Surface Maps
Statewide Aquifer Maps
Pollution Potential Maps
Ground Water Resources Maps

Technical Services
Well Log Filing
Well Log Searches
Request an Off-line Well Log Search
Well Log Computerization Plans
Nonpoint Source Pollution Investigations
Evaluation of Ground Water Availability
Special Investigation Services
Ground Water Conflict Resolution & Investigations

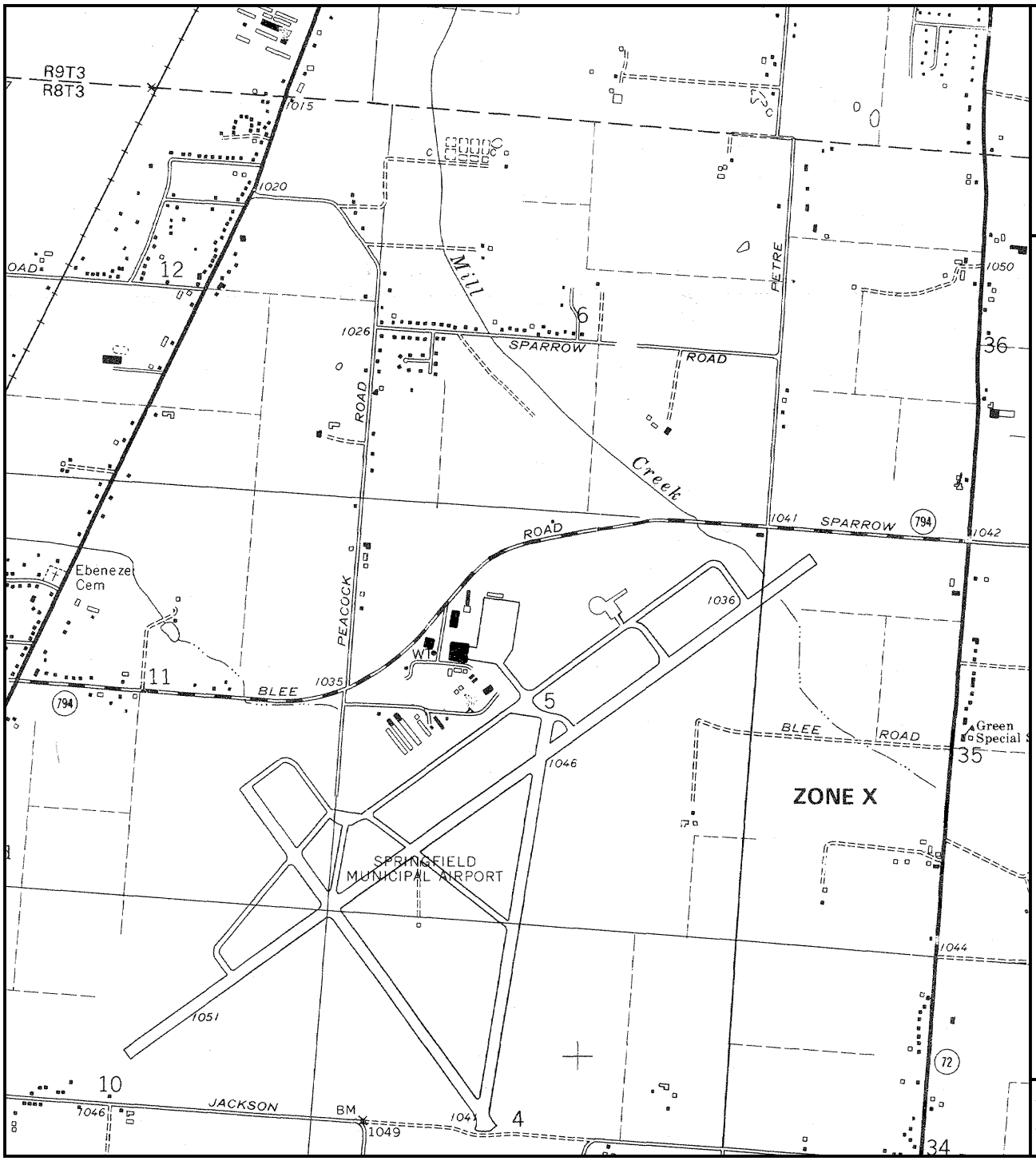
Driller Liaison Program
Ohio Law Related to this Program
Links to Related Sites

Water Well Log
Select A Road

Select a Well Log from the list below.

- Address, Original Owners Name, Well Log Number

300 SPARROW, KENNY ADAMS, 924802
332 SPARROW, DAREL MCPEAK, 843137
376 SPARROW, HOWARD YOST, 699219
388 SPARROW, HOWARD YOST, 699218
400 SPARROW, PAUL GERHARDT, 697668
580 SPARROW, MARK MENAH, 768710
660 SPARROW, DAVID/VICKIE CLARK, 761797
700 SPARROW, QUALITY ONE, 954478
740 SPARROW, MIKE PILCHER, 794768
780 SPARROW, DAVID LINKENHOKER, 781269
820 SPARROW, STEVE KESTNER, 761819
860 SPARROW, PAULA & ROBBY SISCO, 955764
900 SPARROW, RICHARD WYEN, 760505
944 SPARROW, TREOLO, 761804
1066 SPARROW, WM FRILEY, 335422
1166 SPARROW, EARL TENNER, 626663
1240 SPARROW, EARL TENER, 374954
1240 SPARROW, EARL TENER, 374959
1240 SPARROW, EARL TENER, 374993
1240 SPARROW, EARL TENER, 661470
1240 SPARROW, EARL TENER, 719231
1519 SPARROW, KEN WOLF, 939781
1531 SPARROW, DON HILLIARD, 702220
1670 SPARROW, TOM HOHENSTEIN, 872559
1684 SPARROW, TERRY MOTZ, 772972
1700 SPARROW, RON GRIFFITH, 831916
4285 SPARROW, STEVE EUBANKS, 634642
4810 SPARROW, BRENT AYERS, 697761
SPARROW, JOHN MERCER, 63777
SPARROW, LOIS HAYNES, 94640
SPARROW, FLOYD SMITH, 98291
SPARROW, ROY HUSTED, 125331
SPARROW, LOWELL TENER, 131068
SPARROW, EARL TENER, 174167
SPARROW, DALE HIDY, 244592
SPARROW, ROBERT WEAVER, 244593
SPARROW, KENNETH JOHNSON, 259700
SPARROW, SAMUEL MCCORNHEO, 304459
SPARROW, EARL TENER, 360917
SPARROW, KYLE GERHART, 373470
SPARROW, GILBERT AMES, 646347



N

APPROXIMATE SCALE IN FEET

2000 0 2000

NATIONAL FLOOD INSURANCE PROGRAM

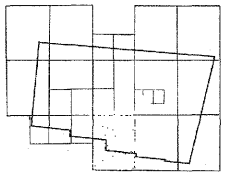
FIRM

FLOOD INSURANCE RATE MAP

CLARK COUNTY, OHIO
(UNINCORPORATED AREAS)

PANEL 325 OF 375
(SEE MAP INDEX FOR PANELS NOT PRINTED)

PANEL LOCATION



COMMUNITY-PANEL NUMBER
390732 0325 A

EFFECTIVE DATE:
JULY 2, 1987

Federal Emergency Management Agency

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
4400 Gateway Blvd; Suite 103
Springfield, Oh 45502

Phone: (937) 328-4600
Fax: (937) 328-4606

December 2, 2009

ODOT
c/o Tricia Bishop
Environmental Specialist
1001 St. Marys Ave
P.O. Box 969
Sidney, Oh 45365-0969

Dear Ms. Bishop,

Enclosed is the completed FCIP report you requested for the relocation of West Blee Road. Please call me at 937-328-4600 if you have any questions. Thank you.

Sincerely,

Kara MacDowell
District Conservationist
USDA-NRCS
Clark County, Ohio

Helping People Help the Land

An Equal Opportunity Provider and Employer

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(REV.3-02)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date Of Land Evaluation Request: 09-22-2009	4. Sheet 1 of 1
1. Name of Project: CLA-794-00.60 (West Blee Road)	5. Federal Agency Involved: FHWA	
2. Proposed Land Use: Roadway	6. County and State: Clark County, Ohio	
PART II *(To be completed by NRCS)*	1. Date Request Received By NRCS 9/28/09	2. Person Completing Form: Kara MacDowell - NRCS
3. Does the corridor contain prime, unique, statewide or local important farmland? YES ☑ NO ☐ *(If no, the FPPA does not apply - do not complete additional parts of this form)*	4. Acres Irrigated	Average Farm Size 252 Ac
5. Major Crop(s): Corn, beans, wheat, sod	6. Farmable Land In Government Jurisdiction Acres: 215,781 Ac % 84%	7. Amount of Farmland As Defined in FPPA Acres: 192,662 Ac % 75%
8. Name of Land Evaluation System Used: None	9. Name of State or Local Site Assessment System: None	10. Date Land Evaluation Returned by NRCS: 12/2/09

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment: Corridor A	Corridor B	Corridor C	Corridor d
A. Total Acres To Be Converted Directly	27A			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	27A			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	24.3			
B. Total Acres Statewide Important or Local Important Farmland	1.8			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	.0125%			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	52.8%			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	76.78			

PART VI *(To be completed by Federal Agency)* Corridor Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b & c. For Non-Corridor project use form AD-1006)*	Maximum Points	Corridor A	Corridor B	Corridor C	Corridor D
1. Area In Non-urban Use	(15)	6			
2. Perimeter In Non-urban Use	(10)	7			
3. Percent Of Corridor Being Farmed	(20)	15			
4. Protection Provided By State and Local Government	(20)	0			
5. Size Of Present Farm Unit Compared To Average	(10)	0			
6. Creation Of Non-farmable Farmland	(25)	0			
7. Availability Of Farm Support Services	(5)	5			
8. On-Farm Investments	(20)	0			
9. Effects Of Conversion On Farm Support Services	(25)	0			
10. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	33			
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100				
Total Corridor Assessment *(From Part VI above or local site assessment)*	160	33			
TOTAL POINTS *(Total of above 2 lines)*	260	110			

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection	4. Was A Local Site Assessment Used?
Corridor A (D1)	<27A	2007	YES ☐ NO ☐

5. Reason For Selection:

Preferred alignment meets force protection distance requirements while minimizing impact to private land owners.

Signature of Federal agency representative completing this form: | Date:

NOTE: Complete one form for each segment with more than one Alternate Corridor

(See Instructions on reverse side)

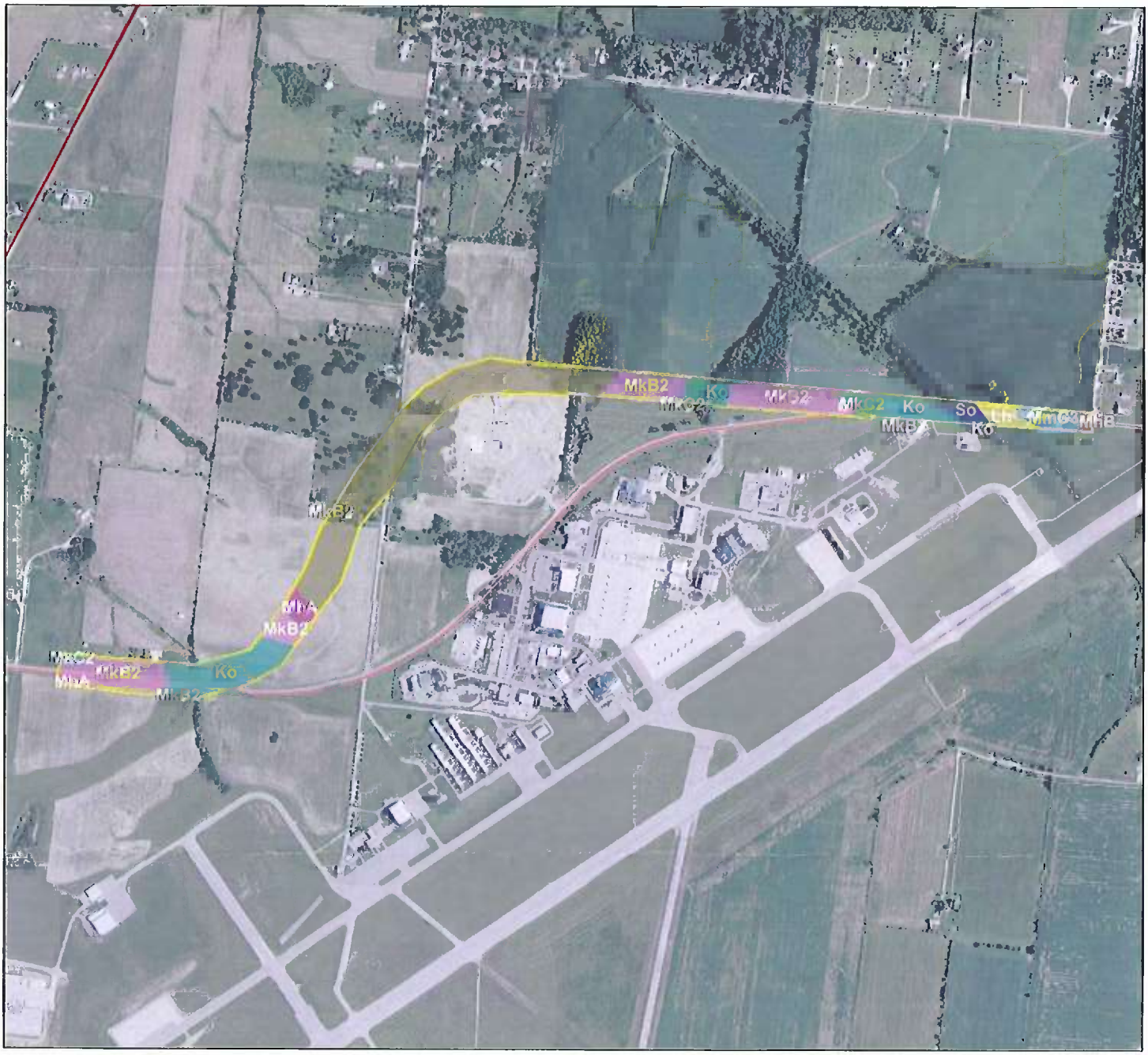
Form NRCS-CPA-106 (03-02)

Soils Map

Date: 11/27/2009

District: CLARK SOIL & WATER CONSERVATION DISTRICT

Field Office: SPRINGFIELD SERVICE CENTER
Agency: USDA - NRCS
Assisted By: Kara L MacDowell
State and County: OH, CLARK



Legend

Soils Map Consplan3

MUSYM

- CeA
- Ko
- Lh
- MhA
- MhB
- MkB2
- MkC2
- MmC3
- So
- Consplan3

610 0 610 1,220 1,830 2,440 Feet

N

Attachment H-9

OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

DATE: August 21, 2009

TO: Rex Dickey, District 7 Deputy Director
Attn: John Horman, Acting District Environmental Coordinator

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Cultural Resources Review

PROJECT: CLA-SR 794-0.60 **PID:** 78677

On April 02, 2009, the Office of Environmental Services (OES) staff completed field investigations for the CLA-SR 794-0.60 project located in Greene Township, Clark County, Ohio. The project is to meet the force protection requirements of the Ohio Air National Guard base while providing for a connection between US 68 and SR 72 that considers future development and does not adversely impact mobility and emergency response time. The project includes the closing of State Route 794 between Mill Creek to the east and the Springfield-Beckley Municipal Airport to the west (approximately 6,250 feet in length); then constructs a new facility northwest of the existing State Route 794 on property owned primarily by the City of Springfield. The Area of Potential Effects (APE) is confined to 100 feet on either side of the center line of the proposed right-of-way for the length of the project (approximately 28.695 acres).

The Ohio Historic Preservation Office's (OHPO) online mapping service found no archaeological resources across the survey area. There is one NRHP listed property in the vicinity of the APE. The Marquart-Mercer Farm (NR# 79001791) is located about 1000 feet north of the east end of the project area. The Farm is located at 763 West Sparrow. The NRHP boundaries of the farm are completely outside the APE for the project, and there is no land being taken from the parcel of land that contains the farm. There are no other previously inventoried History/Architecture resources in or adjacent to the APE.

There are several buildings in the APE for this project that are over 50 years in age.

- The masonry house at 5017 Peacock has been converted from a school house into a single family house (see photos 20-21). The building was built in 1852. The school house is a typical early school house in Clark County. The 1922 *Standard History of Springfield and Clark County, Ohio* shows a photo of a similar school in the area. This school house has been altered over time, including the replacement of the roof, and the possible removal of a bell cupola. There is an attached garage that has been added to the rear, and the windows have been replaced. While the building is representative of the history of education in the county, it no longer retains its integrity of materials. It is not eligible for listing on the NRHP.

- The house at 5250 Peacock was demolished with City of Springfield funds prior to the initiation of this undertaking. The house was built in 1943.

- The house at 1816 W. Blee is a brick ranch built in 1954 (shown in photo 2). It is L shaped, and has a large central chimney and attached one car garage. It is a common house type and is not distinctive for its design. It is not eligible for listing on the NRHP.

- The house at 5232 Peacock is a 1947 brick one story house. It has a breezeway connecting the house to a two car garage (see photo 14). It is a common house type, and is not distinctive for its materials, design or workmanship. It is not eligible for the NRHP.

- The house at 4946 Peacock is a one story frame house built in 1952 (see photo 23). It is a common house type, and is not distinctive for its materials, design or workmanship. It is not eligible for the NRHP. It is at the north end of the segment of Peacock Road that is involved in the project.

The APE was separated into eight archaeological survey locations based upon natural obstructions (such as cultivated fields, wooded areas, and Peacock Road) and survey methodology. Survey location one was in cultivated field with 90 percent surface visibility and subject to surface collection. As a result, two previously unrecorded prehistoric archaeological sites were identified, 33CL583 and 33CL584. Site 33CL583 is a prehistoric isolated find of one Upper Mercer flake. Site 33CL584 represents a lithic scatter consisting of two unknown chert flakes and one Upper Mercer shatter. These sites represent an isolated find and a lithic scatter from a plow disturbed context, each of these sites lack integrity and are not eligible for the National Register of Historic Places.

Survey location three was also in cultivated field with 90 percent visibility and surface collected. No cultural material was identified. At the remaining survey locations (2, 4, 5, 6, 7 and 8) were concluded to be in hydric soil or in disturbed soils. Therefore, no further archaeological investigations are warranted.

In accordance with Stipulation 4B of the *Programmatic Agreement Among The Federal Highway Administration, The Advisory Council On Historic Preservation, The Ohio Historical Society, State Historic Preservation Office, And The State Of Ohio, Department Of Transportation Regarding The Implementation Of The Federal-Aid Highway Program In Ohio (Agreement No. 12642)* executed July 17, 2006, and in compliance with 36 CFR Section 800.4(d)(1), ODOT-OES has determined that "no historic properties affected" is the appropriate finding for the proposed highway project based on the following:

1.) No significant previously known archaeological resources will be affected;

2.) No properties within the APE are eligible for or listed in the National Register of Historic Places (NRHP);

3.) The Marquart-Mercer Farm (NR# 79001791) is located about 1000 feet north of the east end of the project area, and is entirely outside of the APE.

4.) Two of the houses in the APE (1816 W. Blee and 5232 Peacock) are mid twentieth century vernacular brick houses, neither is eligible for listing on the NRHP.

5.) The stone school building at 5017 Peacock is not significant and does not retain integrity of materials, and is not eligible for listing in the NRHP.

6.) Sites 33CL583 and 33CL584 are not eligible for the National Register of Historic Places and no further archaeological investigations are recommended;

7.) The level of disturbance across the APE precludes the existence of any significant archaeological resources. No further archaeological investigations are required unless the scope of the proposed undertaking were to change.

This completes the Section 106 review and no further cultural resource investigations are required. You may process the environmental document with no further comment or involvement from ODOT-OES unless the scope of the proposed undertaking were to change. The environmental document should note the date of this IOC for project Section 106 clearance. The environmental document should also note the date of the July 17, 2006 Programmatic Agreement as the basis for the Section 106 approval. A copy of this IOC should be attached to the appropriate environmental document. If you have any questions or comments regarding this determination, they may be addressed to Tara Tarlton, Staff Archaeologist at tara.tarlton@dot.state.oh.us or 614-644-7087.

Respectfully,

Timothy M. Hill
Administrator
Office of Environmental Services

cc. Project File, Reading File, Mark Epstein, SHPO, w/attachments;

U.S. Department of Transportation
Federal Highway Administration

Ohio Division

200 North High Street
Room 328
Columbus, Ohio 43215
614-280-6896
614-280-6876 Fax
Ohio.FHWA@fhwa.dot.gov

May 28, 2009

Director Jolene M. Molitoris
Ohio Department of Transportation
1980 West Broad Street
Columbus, OH 43223

In Reply Refer To:
HPD-OH

Subject: PM 2.5 Project Level Conformity Determination - Non-exempt projects

Dear Director Molitoris:

This letter responds to ODOT, Office of Environmental Services' May 21, 2009 request for project level PM 2.5 conformity determination for eight projects (*list attached*). The FHWA Ohio Division has reviewed and consulted with USEPA Region 5 and Ohio EPA to determine the status of these projects.

Section 176(c)(1)(B) states that all projects in nonattainment areas are subject to transportation conformity. The March 10, 2006 final rule requires PM 2.5 and PM 10 hot-spot analyses to be performed for projects of air quality concern. USEPA has determined that projects not identified in 40 CFR 93.123(b)(1) as projects of air quality concern, have met statutory requirements and are exempt from further hot-spot analysis (40 CFR 93.116(a)).

Based upon our review of the project listing and through consultation with USEPA and Ohio EPA, we find that projects on the attached list are not projects of air quality concern and are exempt from further hot-spot analysis per 40 CFR 93.116(a). Documents prepared to satisfy NEPA requirements for the subject projects should cite this letter when discussing the status of project level conformity.

If you have any questions or comments, please contact Ms. Leigh Oesterling, Air Quality Specialist, at (614) 280-6837, or leigh.oesterling@fhwa.dot.gov.

Sincerely,

For: Patrick A. Bauer
Acting Division Administrator

Enclosure

May-09

Dist	Project Name	PID	County	Project Description	Sponsoring Agency	Air Quality Status	Fiscal Yr	ADT Information Opening Year: Type A ADT (opening yr)	Truck % (opening yr)	Diesel Trucks (opening yr)	ADT Information Design Year: Type A ADT (design yr)	Truck % (design yr)	Diesel Trucks (design yr)
7	MOT-Olive Road Connector	81035	MOT	The proposed project will extend a new Olive Road north from its current "T" intersection with Salem Bend Drive to connect with Taywood Road at the Taywood Road/Westbrook Road "T" intersection. Salem Bend Drive will be closed at Westbrook Road	Trotwood	Nonexempt	2013	6460	3	140	6916	3	150
1	ALL-IR75	76691	ALL	Project involves reconstruction of IR75 from Auglaize County line to SR81. Interchanges with IR75 will be reconstructed.	ODOT	Nonexempt	2012	23213	32	11551	36000	32	13900
3	LOR-Lear Nagle Road	16319	LOR	Project involves reconstructing 2 miles of roadway including new curbs, storm sewers and sidewalks.	ODOT	Nonexempt	2012	19027	4	531	26000	4	725
7	MOT-US35-18.57	75863	MOT	The proposed project will add a third lane in each direction from approximately Linden Avenue to IR675. The project length is approximately 2.8 miles. The project will also improve/modify the Smithville Road and Woodman Drive interchanges with US35 and eliminate the partial interchange with US35 and Linden Avenue/Dayton-Xenia Road.	ODOT	Nonexempt	2011	65800	6	3444	69560	6	3641
3	MED-SR94-3.80	81338	MED	The proposed project involves the reconstruction of approximately 1.5 miles of SR94. Improvements involve adding an additional lane in each direction, adding new turn lanes, adding turn lane storage lengths to existing turn lanes, restricting left turns exiting at mid block driveways	Wadsworth	Nonexempt	2012	29341	2	467	36260	2	577
3	RIC-Airport West Industrial Park (ARRA Stimulus Project)	86371	RIC	Project involves construction of a new 0.6 mile 2-lane roadway in the Mansfield Lahm Airport industrial development area.	Mansfield	Nonexempt	2010	0	0.00	0	3123	10.00	243
6	PIC/FRA-Alum Creek Drive Extension	81885	PIC/FRA	Project involves widening Alum Creek from 2 to 4 lanes from 2nd Street to Ashville Pike.	Columbus Regional Airport Authority	Nonexempt	2010	5280	12.00	497	17424	12.00	1639
7	CLA-SR794-0.60	78677	CLA	Project involves relocating a portion of SR794 near the Ohio Air National Guard Springfield Base to meet current DOD clearance requirements and to allow for future base growth.	Clark County Engineer	Nonexempt	2012	560	5	21	2190	5	83

Morris.Patricia@epamail.epa.gov
05/18/2009 10:16 AM

To Noel.Alcala@dot.state.oh.us
cc Andrea.Stevenson@dot.state.oh.us, Carmen.Stemen@dot.state.oh.us, Clark.Nash@dot.state.oh.us,
bcc
Subject Re: PM2.5 Project Level Conformity Determination Request for Nonexempt Projects 2008-2012 STIP

Noel,
Thank you for the opportunity to review these projects. I concur that the ADT levels for total traffic and diesel trucks indicate that these are not projects of air quality concern per the March 29, 2006, Guidance on qualitative hot spot analysis in PM2.5 and PM10 nonattainment and maintenance areas..

Also, I will be out of the office starting on May 20th and will return on June 1, 2009

Patricia Morris
Environmental Scientist
USEPA Region 5
(312) 353-8656
morris.patricia@epa.gov

Noel.Alcala@dot.state.oh.us

05/15/2009 10:38 AM

To Patricia Morris/R5/USEPA/US@EPA, paul.braun@epa.state.oh.us
cc leigh.oesterling@fhwa.dot.gov, Andrea.Stevenson@dot.state.oh.us, Elvin.Pinckney@dot.state.oh.us, Tricia.Bishop@dot.state.oh.us, Mac.Vance@dot.state.oh.us, Clark.Nash@dot.state.oh.us, Carmen.Stemen@dot.state.oh.us, Janice.Gartner@dot.state.oh.us, Kevin.Davis2@dot.state.oh.us

Subject PM2.5 Project Level Conformity Determination Request for Nonexempt Projects 2008-2012 STIP

Patricia and Paul:

Attached for your review is a list of Nonexempt projects that are not projects of air quality concern and have met the statuatory requirements of the Clean Air Act and are exempt from PM2.5 hot-spot analysis. No project on the list has an ADT >87,500 AND diesel trucks >7,000 in the design year. Please let me know if you think the project list is acceptable so that we can request FHWA issuance of their project level conformity determination for these projects.

A response by May 29, 2009 would be greatly appreciated. Thanks.

If you have any questions or concerns, please do not hesitate to call.

Noel Alcala, Noise and Air Quality Coordinator, P.E.
ODOT, Office of Environmental Services

Phone: 614/466/5222(See attached file: 3835_001.pdf) 
3835_001.pdf

Ohio Environmental Protection Agency
Division of Air Pollution Control

INTER-OFFICE COMMUNICATION

TO: Noel Alcala, Office of Environmental Services, ODOT

FROM: Frederick Jones, DAPC, ATU, OEPA

DATE: May 20, 2009

RE: CLA-SR794-0.60 PID 78677- Qualitative Mobile Source Air Toxics (MSAT) Analysis Report

Mobile Source Air Toxic (MSAT) Analysis Document Review

Document Reviewed:
Qualitative MSAT Analysis Report CLA-SR794-0.60 PID 78677.

Comments:
Upon Review, Ohio EPA does not have additional comments on the MSAT Analysis Report: CLA-SR794-0.60 PID 78677. The Average Daily Traffic and the Vehicle Miles Traveled described in the report, is in accordance with the ODOT Technical Guidance for Analysis of Mobile Source Air Toxics to be categorized as a "Low MSAT effect "project.

The report identifies the limitation in predicting project specific health impacts through vehicle emissions and provides information in accordance to CEQ regulations 40 CFR 1502.22(b) regarding unavailable or incomplete information.

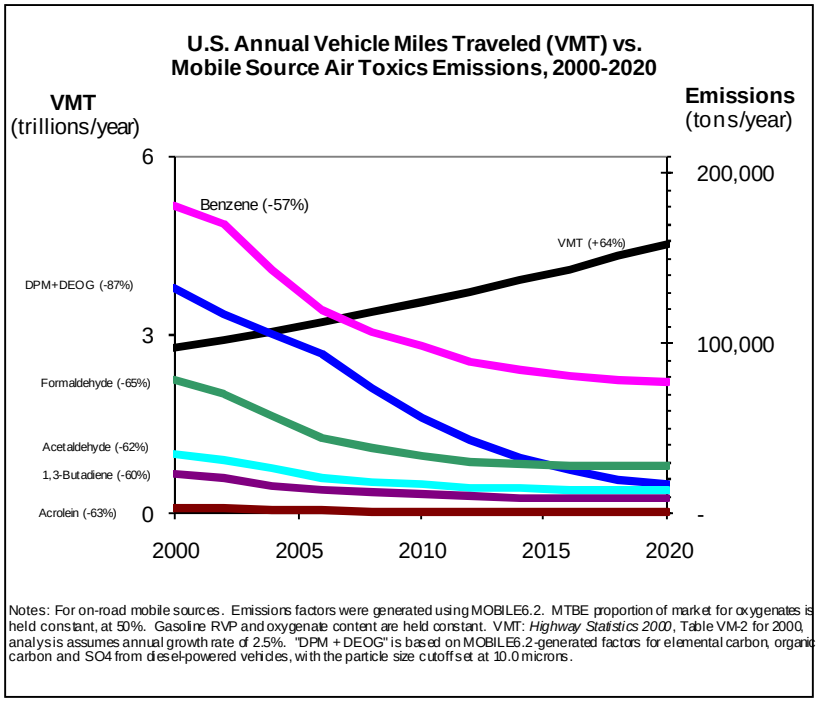
cc: Paul Koval Supervisor, DAPC/ATU

CLA-SR 794-00.60, PID 78677
Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources. 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the following graph:



As a result, EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

Effect of the CLA-794-00.60 Project on MSAT

Clark County and ODOT propose to relocate SR 794 in the proximity of the Ohio Air National Guard Springfield base to meet current Department of Defense clearance (force protection) requirements and to allow for anticipated future base growth. The new alignment will be northwest of the existing roadway (up to 1200') and will be a two-lane section constructed to ODOT Design Standards.

The following tables present the predicted Average Daily Traffic (ADT) and Vehicle Miles Travelled (VMT) for the No Build and preferred Build conditions in opening and design year.

No Build Alternative Traffic Data

Roadway	Corridor Length	Opening Year ADT (2012)	Opening Year VMT (2012)	Design Year ADT (2032)	Design Year VMT (2032)
SR 794, new alignment west of Peacock	0	0	0	0	0
SR 794, new alignment east of Peacock	0	0	0	0	0
SR 794, old alignment west of Peacock	0.4	2,190	876	2,190	876
SR 794, old alignment east of Peacock	1.2	2,450	2,940	2,450	2,940
Peacock Road, between old and new SR 794 alignments	0.3	430	129	430	129
Peacock Road, north of SR 794	0.2	430	86	430	86

Preferred Build Alternative Traffic Data

Roadway	Corridor Length	Opening Year ADT (2012)	Opening Year VMT (2012)	Design Year ADT (2032)	Design Year VMT (2032)
SR 794, new alignment west of Peacock	0.6	2,110	1,266	2,110	1,266
SR 794, new alignment east of Peacock	1.1	2,380	2,618	2,380	2,618
SR 794, old alignment west of Peacock	0.4	80	32	80	32
SR 794, old alignment east of Peacock	1.2	70	84	70	84
Peacock Road, between old and new SR 794 alignments	0.3	100	30	100	30
Peacock Road, north of SR 794	0.2	430	86	430	86

The following table presents the predicted change in VMT for the design year No Build and design year preferred Build conditions from the opening year No Build conditions.

Daily Vehicle Miles Traveled (VMT)

Roadway	Existing Year (2012)	No Build (2032)	% Change – Existing to No Build	Preferred Alternative (2032)	% Change – Existing to Preferred	% Change – No Build to Preferred
SR 794, new alignment west of Peacock	0	0	0.0%	1,266	+45%*	+45%*
SR 794, new alignment east of Peacock	0	0	0.0%	2,618	-11%*	-11%*
SR 794, old alignment west of Peacock	876	876	0.0%	32	-96%	-96%
SR 794, old alignment east of Peacock	2,940	2,940	0.0%	84	-97%	-97%
Peacock Road, between old and new SR 794 alignments	129	129	0.0%	30	-77%	-77%
Peacock Road, north of SR 794	86	86	0.0%	86	0%	0%
Total for Project Corridor	**4,031**	**4,031**	**0.0%**	**4,116**	**2%**	**2%**

* Existing ADTs for SR 794 were used as the denominators.

For each alternative, the amount of MSATs emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated under the preferred Build Alternative is 2% higher than that for the No Build Alternative. The realignment of SR 794 will increase the overall length of the roadway by approximately 0.1-mile.

The project is located within an agricultural area, with scattered single-family homes. . residential area bordering commercial development. The project will shift the traffic on SR 794 closer to homes on Peacock Road, north of the existing SR 794/Peacock Road intersection. This could result in these receptors being exposed to higher MSAT emissions than under the No Build alternative. The magnitude and duration of these potential increases compared with the No Build alternative can not be accurately quantified due to the inherent deficiencies in current models.

Such increased exposure to those residential properties will be offset somewhat by the overall decreased MSAT emissions due to the reduction in vehicle miles travelled and improved travel flow (through the elimination of turning movements for vehicles utilizing this north-south corridor). Additionally, according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

The following information is provided in compliance with 40 CFR 1502.22(b).

Unavailable Information for Project Specific MSAT Impact Analysis

This air toxics analysis includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the alternatives. Due to these limitations, the following discussion is included in accordance with CEQ regulations (*40 CFR 1502.22(b)*) regarding incomplete or unavailable information:

Information that is Unavailable or Incomplete: Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

1. Emissions: The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model--emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.

   These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

2. Dispersion. The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum

concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

3. Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs: Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the

environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems[1]. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

[1] South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community: Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

In this document, FHWA has provided a quantitative analysis of MSAT emissions relative to the various alternatives, (or a qualitative assessment, as applicable) and has acknowledged that (some, all, or identify by alternative) the project alternatives may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

MSAT Mitigation Strategies

Lessening the effects of mobile source air toxics should be considered for projects with substantial construction-related MSAT emissions that are likely to occur over an extended building period, and for post-construction scenarios where the NEPA analysis indicates potentially meaningful MSAT levels. Such mitigation efforts should be evaluated based on the circumstances associated with individual projects, and they may not be appropriate in all cases. However, there are a number of available mitigation strategies and solutions for countering the effects of MSAT emissions.

Mitigating for Construction MSAT Emissions

Construction activity may generate a temporary increase in MSAT emissions. Project-level assessments that render a decision to pursue construction emission mitigation will benefit from a number of technologies and operational practices that should help lower short-term MSATs. In addition, the SAFETEA-LU has emphasized a host of diesel retrofit technologies in the law's CMAQ provisions - technologies that are designed to lessen a number of MSATs.[2]

Construction mitigation includes strategies that reduce engine activity or reduce emissions per unit of operating time. Operational agreements that reduce or redirect work or shift times to avoid community exposures can have positive benefits when sites are near vulnerable populations. For example, agreements that stress work activity outside normal hours of an adjacent school campus would be operations-oriented

[2] SAFETEA-LU, Public Law 109-59, August 10, 2005

mitigation. Also on the construction emissions front, technological adjustments to equipment, such as off-road dump trucks and bulldozers, could be appropriate strategies. These technological fixes could include particulate matter traps, oxidation catalysts, and other devices that provide an after-treatment of exhaust emissions. The use of clean fuels, such as ultra-low sulfur diesel, also can be a very cost-beneficial strategy.

The EPA has listed a number of approved diesel retrofit technologies; many of these can be deployed as emissions mitigation measures for equipment used in construction. This listing can be found at: www.epa.gov/otaq/retrofit/retroverifiedlist.htm

Longer-term MSAT emissions can be more difficult to control, as variables such as daily traffic and vehicle mix are elusive. Operational strategies that focus on speed limit enforcement or traffic management policies may help reduce MSAT emissions even beyond the benefits of fleet turnover. Well-traveled highways with high proportions of heavy-duty diesel truck activity may benefit from active Intelligent Transportation System programs, such as traffic management centers or incident management systems. Similarly, anti-idling strategies, such as truck-stop electrification can complement projects that focus on new or increased freight activity.

Planners also may want to consider the benefits of establishing buffer zones between new or expanded highway alignments and areas of vulnerable populations. Modifications of local zoning or the development of guidelines that are more protective also may be useful in separating emissions and receptors.

The initial decision to pursue MSAT emissions mitigation should be the result of interagency consultation at the earliest juncture. Options available to project sponsors should be identified through careful information gathering and the required level of deliberation to assure an effective course of action.

OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

DATE: September 14, 2009

TO: Brad Lightle, D-7 Planning and Programs Administrator
Attention: Tricia Bishop

FROM: Noel Alcala, Noise and Air Quality Coordinator, Office of Environmental Services

SUBJECT: Revised Noise Analysis

PROJECT: CLA - SR794-0.60- PID 78677 (W. Blee Road)

Due to recent design changes made to the project, OES prepared a revised Noise Analysis at the request of D-7 for the subject project to identify potential noise impacts associated with the subject new location project. There are several noise sensitive land uses (residences) associated with this project. See attached mapping. Two noise measurements were taken, one along Peacock and one along SR794 (Blee Road). Noise levels for the Existing condition and Design Year Build scenarios were evaluated using the FHWA Traffic Noise Model Version 2.5 Program. See attached model results.

	Field Reading (dBA)	Existing using traffic counts (dBA)	Design Year Build (2030) (dBA)
Receiver #1- 1816 W. Blee Road	50	55.8	59.1
Receiver #2- 4946 Peacock Road	51	49.9	50.6
Receiver #3- 5017 Peacock	N/A	46.8	47.1

Based on the modeling, there are no predicted design year impacts associated with the project, since none of the levels approach or exceed the Noise Abatement Criteria (NAC) (67 dBA) and there is no predicted substantial or extraordinary increase in noise.

Further consideration for noise abatement is unwarranted, unless the project scope changes and new noise receptors are potentially impacted. This IOC supercedes the previous IOC dated August 13, 2008.

If you have any questions or concerns, please contact Noel Alcala, Noise and Air Quality Coordinator at (614) 466/5222.

NAA:naa

Attachments (TNM printouts, mapping, noise reading spreadsheets)

c: File - Reading File

U.S. ENVIRONMENTAL PROTECTION AGENCY

Environmental Justice Geographic Assessment Tool

County and State Comparison

Overview

	Study Area	CLARK County, OH	OHIO
Total Persons:	317	144742	11353140
Population Density:	125.69 /sq mi	361.98 /sq mi	277.25 /sq mi
Percent Minority:	4.2%	12.4%	16%
Persons Below Poverty Level:	24 (7.6%)	15054 (10.4%)	1170698 (10.3%)
Households in Area:	125	56648	4445773
Households on Public Assistance:	1	2041	143132
Housing Units Built <1970:	76%	69%	61%
Housing Units Built <1950:	28%	35%	31%

Race

Race Breakdown	Study Area	CLARK County, OH	OHIO
White:	303 (95.8%)	127650 (88.2%)	9640523 (84.9%)
African-American:	10 (3.3%)	12806 (8.8%)	1288359 (11.3%)
Hispanic-Origin:	0 (0.0%)	1554 (1.1%)	213889 (1.9%)
Asian/Pacific Islander:	0 (0.0%)	671 (0.5%)	132131 (1.2%)
American Indian:	0 (0.0%)	438 (0.3%)	26999 (0.2%)
Other Race:	0 (0.0%)	650 (0.4%)	89149 (0.8%)
Multiracial:	3 (0.9%)	2474 (1.7%)	173338 (1.5%)
(* Columns that add up to 100% are highlighted)			

Age

Age Breakdown	Study Area	CLARK County, OH	OHIO
Child 5 years or less:	16 (5.2%)	11587 (8.0%)	908264 (8.0%)
Minors 17 years and younger:	71 (22.3%)	36355 (25.1%)	2885141 (25.4%)
Adults 18 years and older:	246 (77.7%)	108387 (74.9%)	8467999 (74.6%)
Seniors 65 years and older:	49 (15.4%)	21306 (14.7%)	1508095 (13.3%)
(* Columns that add up to 100% are highlighted)			

Education

Education Level (Persons 25 & older)	Study Area	CLARK County, OH	OHIO
Less than 9th grade:	11 (5.1%)	4132 (4.6%)	331801 (4.8%)
9th -12th grade:	17 (7.7%)	13750 (15.4%)	930284 (13.3%)
High School Diploma:	100 (44.7%)	37802 (42.3%)	2674551 (38.4%)
Some College/2 yr:	52 (23.2%)	19605 (21.9%)	1471964 (21.1%)
B.S./B.A. or more:	43 (19.3%)	14178 (15.8%)	1563532 (22.4%)

Language

Ability to Speak English	Study Area	CLARK County, OH	OHIO
Population Age 5 and Over:	303	135109	10599968
Speak only English:	297 (95.5%)	131010 (93.7%)	9951475 (87.7%)
Non-English at Home:	7 (2.1%)	4099 (2.9%)	648493 (5.7%)
Speak English very well:	2 (0.7%)	2893 (2.1%)	414034 (3.7%)
Speak English well:	4 (1.1%)	555 (0.4%)	139804 (1.2%)
Speak English not well:	1 (0.3%)	619 (0.4%)	81170 (0.7%)
Speak English less than well:	1 (0.3%)	651 (0.5%)	94655 (0.8%)
Speak English not at all:	0 (0.0%)	32 (0.0%)	13485 (0.1%)

Close Window

SOURCE: U.S. Bureau of the Census
Data represents population and housing statistics by county for Census 2000.

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Last updated on Friday, April 3rd, 2009
http://iaspub.epa.gov/envjust/demog_report_2.doCountyStateComp

5.0 PUBLIC INVOLVEMENT

5.1 PUBLIC INVOLVEMENT PLAN

Purpose

The public involvement during this transportation planning study served two basic purposes; it was necessary to disseminate information and to solicit input. It was important that the components of the Public Involvement Plan addressed both objectives. The Public Involvement Plan for the SR 794 Sub-Area Study:

- Educated the public regarding concepts of Force Protection, Access management, Regional mobility and connectivity and the Planning Process;
- Solicited public input to identify problems and establish project objectives;
- Provided the public with information on the progress of the study;
- Provided information on the potential impacts and benefits of each alternative under consideration; and
- Solicited input for a preferred conceptual alternative.

The Public Involvement Plan approved for the study is included in Appendix E.

Methods

In order to achieve the public involvement goals, the study team used several methods described in below.

Mailing List

The TCC developed a public contact list that served as the basis for notifications and mailings. TCC updated the list throughout the process with the names and contact information from meeting attendance sheets and submitted comment forms. Included in this public contact list was information such as name and mailing address. This public contact list is included in Appendix E.

Stakeholder interviews

The TCC and Tetra Tech contacted stakeholders to discuss the study, the process to be followed, the individuals roles as stakeholders, and to collect any information for further interviews. These interviews were conducted by phone, as one-on-one meetings, and in small group meetings when appropriate. These interviews included local businesses (such as Young's Dairy), various public officials (such as State Representatives) and emergency and law enforcement officials not already part of the study team.

The following table lists the stakeholders interviewed as past of the public involvement process.

Table 7: Stakeholders Interviewed

Name	Title	Organization
Shane Farnsworth	Director	Clark County Planning Commission
Bruce Smith	Clark County Engineer	Clark County Engineer
David Hobson	Congessman	US House of Representatives
Bill Young	Fire Chief	Hustead Volunteer Fireman Association
Ms Richards	EMS Coordinator	Hustead Village EMS
Vicki Hartley		Springfield-Beckley Airport
Dan Young		Young's Dairy
Leo Shanayda	Assistant City Engineer	City of Springfield
Lt. Dan Mitch		Clark County Sheriff
Bill Cochensparger		ODOT District 7
William Harrison	Deputy Director	ODOT District 7
Randy Chevalley	Planning Administrator	ODOT District 7
Matt Parrill		ODOT District 7
Bruce Stewart	Superintendent	Clark-Shawnee Local SD
Denney Howell	Superintendent	Greenon Local Schools
Gene A. Kelly	Sheriff	Clark County Sheriff
Mathew Kridler	City Manager	City of Springfield
Jim Bodenmiller	Assistant City Manager	City of Springfield
Tim Gothard	City Engineer	City of Springfield
John Detrick	Commissioner	Clark County Commissioner
John Maurer	Township Trustee	Green Township
Alan Armstrong	Township Trustee	Green Township
Tom Waddle	Township Trustee	Green Township
Doug Smith	Township Trustee	Springfield Township
John Scoby	Township Trustee	Springfield Township
Ron Lowe	Township Trustee	Springfield Township

Newsletter

Tetra Tech prepared a newsletter for use throughout the study. Newsletters were mailed to the public contact list periodically over the course of the study to keep the public informed of the study and its progress. The newsletters also served as notifications of public meetings and responses to public comments.

The first newsletter was mailed prior to the July 2005 public involvement meeting and introduced the study purpose and process. The second newsletter was mailed in the fall of 2005 after the first public meeting to summarize the results of the July 2005 meeting and announce the date and location for the October 2005 public meeting. The third newsletter was mailed in January 2006 and summarized the results of the October 2005 meeting. The third newsletter also introduced the two preferred conceptual alternatives to the public and included the status of the study's environmental and design tasks. All three public newsletters are included in Appendix E.

Public Meetings

Two open house style public meetings were held throughout the course of the study. Property owners in the study area and stakeholders were notified by direct mail of the public meeting

dates, times and locations two weeks prior to the meeting dates. Two press releases were issued by TCC, the first was issued two weeks prior to the public meeting and the second was issued the day before the meeting. Written comments were officially accepted at each meeting and for a two week period after each meeting; in actuality, comments were accepted throughout the entire study process. Telephone comments were also accepted by the TCC staff. The subsequent section details each public meeting.

5.2 Public Meetings

July 2005 Public Meeting

The purpose of the first public meeting was to solicit input from the public on the purpose and need document and red flag summary for the study. The first meeting also introduced the public to the study process. The public meeting was held at the Hustead Elementary School on July 20, 2005. The public meeting presented information collected to date, discussed the study process, and gathered feedback on the presentation. The meeting was well attended by approximately 75 people.

First public involvement meeting at Hustead Elementary School

Appendix E includes a complete summary of the first public meeting, including the sign-in sheets, copies of the available handouts, the power point presentation, and the exhibits on display.

In July 2005 as a result of this first public meeting, eighteen comments were received via e-mail or comment form. The study team reviewed these comments prior to developing any alternatives for consideration. One comment suggested inclusion of a bike trail in the project, half of the comments involved the OANG base and its closure or the BRAC, one comment was received asking that no additional traffic be forced onto Sparrow Road and two comments additionally mentioned zoning issues, which are not part of this study but were relayed to the appropriate entities. A summary of these comments and the study team's responses are included in Appendix E, along with the actual comment forms and emails.

October 2005 Public Meeting

A second public meeting was held to share the conceptual alternatives. The public was notified of the meeting by traditional popular ads placed in the Springfield News-Sun on the Sunday before the meeting as well as a day before and the day of the public meeting. In

addition, the newsletter mailed to the public contact list in September 2005 announced the date, time, and place of the second public meeting.

This second public meeting was held at the Hustead Fire Station on October 12, 2005. The meeting was attended by 66 residents and interested members of the community. The sign-in sheet is included in Appendix E.

Second public involvement meeting at Hustead Fire and EMS station

The open house style meeting included displays of each alternative under consideration along with the associated details, such as property impacts, environmental impacts, and probable costs. The public had an opportunity to provide written comments and to ask Study Team representatives questions regarding the study and the alternatives. Further outreach was conducted by Representative Widener's office to encourage the public's involvement and comments.

From this second public meeting, 42 formal comment forms were received. One of the 42 comment forms was a petition signed by 69 persons. Many of the comment forms provided feedback on multiple issues. The actual comment forms are included in Appendix E. The following is a summary of the most common topics mentioned on the 42 comment forms (Again, some forms contained multiple comments so there are more comments then actual comment forms received).

- Nineteen comment forms (45%) stated a preference for one or more of the alternatives in the SR 794 Vicinity (D1, D2, D3, D4).
- Twelve comment forms (29%) stated opposition to the Jackson Road Vicinity alternatives [this included a petition of 69 persons – counted as one comment for these calculations but taken individually when weighing the alternatives for comparison and a second petition of 7 persons also counted as one comment]. The petition stated that they did not support the Jackson Rd alternatives. This helped the stakeholder group narrow alternatives to the more publicly favored SR 794 vicinity alternatives.
- Five comment forms (12%) stated a preference for moving the base buildings.
- Five comment forms (12%) stated opposition to the Sparrow Road alternative (E1).
- Five comment forms (12%) stated that the project was a waste of tax payer dollars.

- Four comment forms (10%) expressed some confusion or lack of understanding regarding the Terrorism Standards and how the BRAC decision will affect the base.
- Three comment forms (7%) stated a preference for SR 794 to remain open in its current location.
- Two comment forms (5%) stated a preference for Alternatives in the Jackson Road Vicinity (F1, F2, F3).

Other comments were received regarding various other aspects of the project including one comment form which stated support for the No-Build Alternative. The percentages were calculated by tallying the subjects discussed in each received comment form and dividing by the total number of comment forms received (42). For example, 19 comment forms discussed a preference for alternatives D1, D2, D3, and D4; 19 divided by 42 equals 45 percent of the total comment forms mentioned a preference for alternatives D1, D2, D3, and D4.

A summary of all comments and the study team's responses has been compiled and included in Appendix E. A newsletter was sent out in January 2006 which summarized the comments, provided many answers to popular questions, and described the project's next steps. Again, this newsletter is included in Appendix E.

5.3 TCC Public Involvement

Throughout the study process, the TCC updated its website (http://www.clarktcc.com) to include the latest study information including meeting minutes, newsletters, and contact information. Also, announcements about public meetings and handouts from all public meetings were posted on the TCC website.

On February 10, 2006 the TCC Board held its regular meeting. The agenda included discussion of the SR 794 Sub-Area Study with the intent of finalizing the planning study. The TCC desired to continue the study of Alternative D4 as the preferred conceptual alternative. Though, in attendance at the TCC Board meeting were about twenty residences of the Peacock Road area who voiced concern with choosing alternative D4. The Peacock Road residents stated they would, however, accept Alternative D1. In part because of the opposition, the TCC Board delayed approving the planning study and re-opened the public comment period.

On February 15, 2006, the TCC mailed letters to area residents again explaining the SR 794 Sub-Area Study's purpose and need and the recommended alternatives, D4 and D1. The TCC requested written comments by Friday February 24, 2006. A copy of this letter is included in Appendix E. In addition, the TCC issued a news release announcing the public comment period to the following: WULM Radio, WKSW Radio, WHIO Radio, WKEF Radio, WHIO Radio, WDTN TV, WHIO TV, Springfield News-Sun, Springfield Sun, Enon Messenger, Fairborn Daily Herald, and the Dayton Daily News. A copy of the news release is included in appendix E.

In response to the February 15, 2006 letter and press release, the TCC received a petition against Alternative D4 which included a total of 637 signatures (see Appendix E). Furthermore, the TCC received approximately 40 individual comments. The majority of these comments stated opposition against alternative D4 and/or support for alternative D1. A complete

summary of these comments, the TCC's responses, and the actual comment forms are included in Appendix E.

On March 2, 2006, the TCC mailed another letter to area residents thanking them for commenting and announcing that both alternatives D1 and D4 would be retained as feasible alternatives. The letter also announced that alternative D1 would be the preferred conceptual alternative and would be announced at the March 10, 2006 TCC Board meeting. A copy of this March 2, 2006 letter is included in Appendix E.

At the March 10, 2006 TCC Board meeting, the TCC Board discussed modifying D1 to maximize the use of the City of Springfield's property and allow for future growth of the OANG base. During the meeting, several local residents commented on the recommended D1 alternative and the potential modifications. Several residents were concerned with the speed on Peacock Road and whether Alternative D1 would cul-de-sac Peacock Road. The TCC confirmed that a cul-de-sac on Peacock Road would not be suitable for emergency vehicles. Most of the public concerns regarded the OANG base and City of Springfield's plans for future growth and expansion in the area. A complete summary of the public comments and questions raised at the meeting is included in Appendix E.

As a result of the March 10 meeting, the TCC Board again postponed making a decision and reconsidered whether D1 or a slightly modified D1 should be the recommended preferred conceptual alternative. On April 21, 2006 the TCC Board met and several members of the public were present to again comment on the conceptual alternatives. The April 21 meeting resulted in the TCC Board voting on Alternative D1 as the preferred conceptual alternative. The minutes from this meeting and final vote are included in Appendix E.

5.4 Media Coverage

Throughout the study process, several articles concerning the study ran in local newspaper or were posted on local newspapers' websites. Following is a summary of those articles, and the complete articles are included in Appendix E.

Table 8: Media Coverage

Date	Media	Headline	Summary
unknown	Springfield News-Sun	Searching for options to alleviate Guard base's safety concerns	The article announced the TCC's plan to contract with a consulting company to study alternatives to closing SR 794. The article also announced the public hearing to be held at Hustead Elementary School on 4/27/05 with a comment period open until May 12, 2005.

Date	Media	Headline	Summary
4/28/05	Springfield News-Sun	Residents voice concerns about ownership of 794	The article was published after a meeting held to discuss transferring SR 794 ownership from ODOT to Clark County. Attendees were concerned with the quality of maintenance on SR 794 if it became a county road and the impacts to emergency routes for the Hustead Fire Department. Attendees also questioned the future of the OANG base.
7/18/05	Springfield News-Sun	Public input sought on State Route 794	The article briefly described the study and announced the public meeting at Hustead Elementary School on 7/20/05.
7/21/05	Springfield News-Sun	Residents not anxious for change	The article followed the 7/20/05 public meeting and described the study's purpose and need. The article clarified that alternatives were not yet developed and the study was starting with a "clean slate" for ideas. The article noted residents concerns with re-routed traffic in front of their homes, delayed response times for emergency vehicles, and potential loss of property. In addition, the article clarified that the process of ODOT turning SR 794 over to Clark County.
8/17/05	Springfield News-Sun	Group to help track 911 calls on cell phones	The article indicated that the Clark County Commissioners postponed assuming ownership of SR 794 until December 2005 when the TCC planned to announce results of the planning study.
10/02/05	Springfield News-Sun	Air National Guar units, including Springfield's, upset at being curtailed by realignment commission	The article discussed in general the potential changes to the OANG bases around Ohio; but specifically, the article mentioned that the Springfield base was marked for realignment with fighter jets and personnel leaving for Columbus.
12/10/05	Springfield News-Sun	Engineers offer Route 794 options	The article described the two feasible alternatives and explained that additional environmental and engineering studies of the alternatives would continue after securing funds.
2/10/06	Springfield News-Sun	Decision on road expected	The article announced that the TCC would decide at a meeting on 2/10/06 how to realign SR 794.

Date	Media	Headline	Summary
2/11/06	Springfield News-Sun	Neighbors question relocating Route 794	The article mentioned the opposition by Peacock Road area residents of alternative D4. The article also provided contact information for submitting comments to the TCC, and it announced the next TCC Board meeting to be held March 10, 2006.
2/23/06	Yellow Springs News	Decision coming on plan for airport	The article mentioned the February 10, 2006 TCC Board meeting during which Peacock Road residents opposed alternative D4. The article continued to discuss the concerns of Peacock Road residents with alternative D4 and with the study's public involvement process.
3/2/06	Springfield News-Sun	Officials rethinking Route 794 plans following complaints from residents	The article announced that the TCC would delay a vote on the preferred conceptual alternative until April 2006. The article mentioned that the study team was looking at a slightly modified version of alternative D1 which would avoid affected homes. Furthermore, the article mentioned that residents were dissatisfied with the delayed knowledge about the base's expansion plans as another reason for selecting the preferred conceptual alternative.
3/11/06	Springfield News-Sun	Residents press their case against plan to realign Route 794	The article noted that the TCC planned to vote on a preferred conceptual alternative on April 14, 2006. The article mentioned that residents wanted to know the exact location of the road. In addition, the article mentioned residents' suggestions for an alternative south of the airport or for a concrete barrier between the airport and SR 794.

Clark County Engineer's Department

Bruce C. Smith, P.E., P.S.
Clark County Engineer

Paul W. DeButy, P.E. – Deputy Engineering/Planning
Kenneth D. Fenton, P.S. – Deputy Engineer
Doug Frank – Superintendent, Bridges/Garage/Traffic
Mark Niccolini – Drainage Maintenance Supervisor

Ned G. Weber – Deputy Operations/Maintenance
Thomas Bender, P.E. – Project Design Engineer
Donald Boyle – Road Superintendent
Lew Richards – Traffic Supervisor
William Pierce, P.S. – Tax Map Director

October 23, 2008

RE: STATE ROUTE 794 RELOCATION

Dear Sir or Madam:

In 2006, the Springfield-Clark County Transportation Coordinating Committee (TCC) completed a planning study to identify appropriate alternatives for the relocation of State Route 794 away from the Ohio Air National Guard base. Public involvement efforts, including news releases, direct mailings, and meetings were undertaken to solicit public and local agency input. Your name was obtained from attendance lists and mailing lists associated with the preliminary study.

As a result of public input and local agency input, alternatives D1 and D4, as shown on the enclosed illustration, were selected as the final preferred alternatives. In April 2006, the TCC Board voted to select alternative D1 as the preferred alternative for design after further public involvement and evaluation of these two alternatives.

The Clark County Engineer's Department will lead the design and plan development of the project and will assume ownership of the roadway once constructed. Design efforts will be coordinated with the Ohio Department of Transportation, the City of Springfield, and the Ohio Air National Guard Base. The County Engineer has contracted with American Structurepoint, Inc., of Columbus, Ohio, to prepare detailed construction drawings for the construction of alternate D1. Onsite surveying and soil investigations will begin this fall, and preliminary plans will be completed by April 2009. Construction is currently scheduled for 2012.

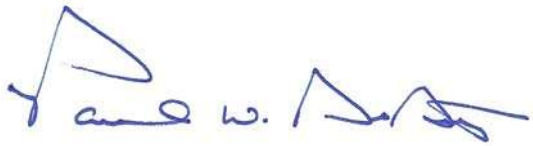
Clark County invites your questions or comments regarding the project and the selected alternative. Issues you may wish to comment on include, but are not limited to, the effect of the project on local residents, air quality, the local economy, and historic or cultural resources. Clark County does not currently meet the USEPA's air quality standard for PM2.5 (particulate matter up to 2.5 micrometers in size). Clark County currently meets the USEPA's air quality standard

4075 Laybourne Road
Springfield, Ohio 45505-3613
(937) 521-1800
(937) 328-2473 fax
www.clarkcountyohio.gov/engineer

for ozone. Consistent with the Ohio State Implementation Plan for the attainment and maintenance of the national ambient air quality standards (NAAQS), Clark County undertakes agency planning and air pollution control measures to achieve and maintain air quality standards. Please contact this office with any questions or concerns.

Sincerely,

Bruce C. Smith, P.E., P.S.
Clark County Engineer



Paul W. DeButy, P.E.
Deputy, Engineering and Planning

K:\SR 794\Environmental\Stakeholder Update 102308.doc

November 10, 2008

Clark County Engineer's Department
Bruce C. Smith
Clark County Engineer
4075 Laybourne Rd.
Springfield, OH 45505

Mr. Smith:

Attached please find my response to your letter of October 23, 2008. I would be very pleased to receive a response from you on some of my confusion regarding this project.

You may either write or email me, which ever is easiest for you. I know you are extremely busy and I appreciate the opportunity to respond to your letter.

I never complain about the planes flying over my home. I love to see and hear them. I appreciate the work the OANG does for this country and I'm proud to be here.

Thank you for your time.

Sincerely,

Nan Gregory

Nan Gregory
15 W. Possum Rd
Springfield, OH 45506
ngregory002@woh.rr.com

Re: State Route 794 Relocation.

As I read your notice, I was wondering if you were at the same meeting that I attended. The one I attended was full of people who were totally against any kind of road relocation. Paragraph two of your notice, reflected that after the result of public input, alternative D1 was preferred after the public involvement.

It seems obvious to "the public" that you were simply going through the motions of asking what the public wanted and your decision was made far before the initial meeting with neighbors, etc. If it was true that you cared about what the public wanted, you would leave things as they are, for the convenience of the public.

One of the reasons you listed for the necessary change was that stopping the traffic will improve the air quality for the airport area. It is ridiculous to think that it is the cars causing the problems and not the fuel from YOUR trucks, vehicles, airplanes, training sessions, etc.

Please don't get me wrong. I appreciate the protection they give and I love watching the planes go over my home. The noise of the planes never bothers me. I am fascinated by them.

I understand that sometimes there needs to be changes made. However, this is not one of them. If you think that you will convince us that it is for safety measures because of availability to OANG, that is another area that you are wrong. There are plenty of other ways for someone to cause harm or destruction to the OANG and the Springfield Airport. Have you heard of missiles, bombs, mailed items, airplanes flying, etc. Please don't think that we are so naive to believe it is a safety measure. If someone or another country wants to do destruction, they don't have to drive by to do it.

I'm not quite sure how the road changes will affect our local economy, historic or cultural resources as mentioned in your letter. But I would be glad to hear an answer to that. Maybe I would feel better about being railroaded.

I am generally not someone who complains, but someone who adapts to changes easily. And I will make this change also. I realize I'm not going to change your minds, but I felt like I needed to let you know that there are many people in the area who are upset. It is up to them to comment and I am only speaking for myself. But my vote, obviously, is not to change the roadway. It was OANG's decision to build so close to the road. I honestly believe that one reason to close the road is so OANG can have room to expand. They are a little bit land locked because the road prevents them from having more buildings without crossing a road. And if that is reason, just please be honest and tell us. It would be more understanding than the reasons **you** have listed.

Clark County Engineer's Department

Bruce C. Smith, P.E., P.S.
Clark County Engineer

Paul W. DeButy, P.E. – Deputy Engineering/Planning
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Doug Frank – Superintendent, Bridges/Garage/Traffic
Mark Niccolini – Drainage Maintenance Supervisor

Ned G. Weber – Deputy Operations/Maintenance
Thomas Bender, P.E. – Project Design Engineer
Donald Boyle – Road Superintendent
Lew Richards – Traffic Supervisor
William Pierce, P.S. – Tax Map Director

Monday, December 01, 2008

Nan Gregory
15 W. Possum Road
Springfield, Ohio 45506

Dear Ms. Gregory:

Thank you for your letter relating to various aspects of the proposed S.R. 794 roadway relocation project. I will attempt to respond to questions raised in your letter, hopefully I can provide some further clarification.

There was public sentiment expressed that nothing be done, however, doing nothing would leave the base with less clearance from the roadway than that required by current antiterrorism standards. The United Facilities Criteria (UFC) 4-010-02 for antiterrorism and Force Protection (AT/FP) provides the minimum criteria for AT/FP developed by the Department of Defense (DOD). All military installations, including National Guard and Reserves, are required to make appropriate changes to meet the criteria. Given the need to meet the criteria, various alternatives were evaluated.

Related to the selection of the preferred alternate, it is not true that a decision was made in advance and public input ignored. The alternate selected by the TCC Technical Advisory Committee and forwarded to the TCC was alternate D4. Meetings were subsequently held and public input received and considered. The Transportation Coordinating Committee (TCC) ultimately selected alternate D1 as the preferred alternate. I believe the selection of D1 was in large part due to public input received.

References in our letter air quality, local economy, and historic or cultural resources etc. simply refer to issues that may be of concern and will be considered during plan development. These issues, including any specific comments received from the public, will be evaluated during the plan development process.

I hope this will help to clarify some of the issues. Please feel free to contact this office if you have any further questions or concerns.

Sincerely yours,

Bruce C. Smith, PE, PS
Clark County Engineer

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OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Rex Dickey, District 7 Deputy Director
Attn: Tricia Bishop

DATE: May 18, 2009

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Environmental Site Assessment Screening

PROJECT: CLA-794-00.60

PID: 78677

This office has reviewed the Environmental Site Assessment (ESA) Screening for the above referenced project which was produced by the District.

Base on the information provided showing that the project is located in agricultural fields, we concur with the District that project does not warrant any further environmental site assessment or special material management. However, if the plans change and ROW and/or deep excavation will occur at the former Springfield Landfill or the Ohio National Guard facility, further investigation may be warranted.

If you have any questions or concerns, please contact Juliet Denniss, Environmental Supervisor, at (614) 466-7942.

TMH:jdd

c: John Horman, D-7
File w/attachment
Reading File

ESA Screening
CLA-SR 794-00.60
PID 78677

Project Description: Clark County and ODOT propose to relocate SR 794 in the proximity of the Ohio Air National Guard Springfield base to meet current Department of Defense clearance (force protection) requirements and to allow for anticipated future base growth. The new alignment will be northwest of the existing roadway (up to 1200') and will be a two-lane section constructed to ODOT Design Standards.

Historical Resources: Historical review included the 1875 Clark County Atlas and the 1964 aerial photographs for the area. Clark County Combined Health District Records for the Springfield Landfill and the 1994 Phase I Environmental Site Assessment of three Springfield-owned tracts within the project area prepared by Springfield Environmental for the City of Springfield were also reviewed.

Historical records indicate that the project area has been predominantly agricultural, with associated farmsteads and scattered residential properties. Review of aerial photographs did not indicate that activities associated with the Ohio Air National Guard or Springfield Airpark have extended into the project's likely construction limits.

The only property of concern identified in the review of the historic records is the former Springfield landfill located within the triangle formed by the existing SR 794 and the proposed SR 794. This trench & fill style landfill opened in approximately 1968 with approval from the Ohio Department of Health. In a letter dated 01-12-1967, the City indicates to the Ohio Department of Health that trenching operations will begin approximately 25' from the north property line.

The landfill was closed in the mid-1980s. Since the late 1980s, Springfield has utilized portions of the landfill for pit disposal of animal carcasses.

From 2002 to 2005, the Clark County Combined Health District inspected the site as part of regular monitoring and also due to complaints relating to leachate, inadequate site control, and related concerns raised by the Ohio Air National Guard. A report was issued by the Combined Health District in October 2005 and recommendations were submitted to the City of Springfield. Based on the July 2007 inspection, it appears all recommendations were undertaken at the site.

Regulatory Database Review: An EDR Area Study was prepared for the project area on 06-10-2005 as part of the SR 794 Sub Area Study. The following were identified within or adjacent to the project corridor:

Springfield Beckley Municipal Airport at 1251 W. Blee Road – The Airport is a RCRA Small Quantity Generator with no reported violations or enforcement actions. The Airport has 7 Registered USTS, of which 5 have been removed. The remaining two are 10,000-gallon fiberglass jet fuel tanks. There are three reported UST release incidents, all with "no further action" status and likely associated with the tank closures.

Ohio Air National Guard at Springfield-Beckley Municipal Airport – In 1995, the facility was evaluated for the USDOE under the Installation Restoration Program. The Site Investigation Report for the facility did not identify any concerns within the project's potential construction limits. OANG is an OEPA DERR facility; the OEPA factsheet regarding the facility references the USDOE investigation.

BUSTR records indicate one registered UST for the facility; this tank has been removed. There has been one reported UST release incidents with "no further action" status and likely associated with the tank closure.

OANG is a RCRA Small Quantity Generator with no reported violations or enforcement actions. The site is included on the Ohio SPILLs dataset. The record appears to be associated with on-site detonation activities.

The 178 Fighter Wing at Springfield-Beckley Municipal Airport – The 178 Fighter Wing has 7 registered tanks, 4 of which have been removed. The remaining tanks are 25,000 gallon composite tanks for jet fuel. There have been no reported leaking UST incidents associated with these tanks.

Springfield Landfill – Several drums with unidentified contents were reported to the OEPA by the Clark County Combined Health District at the time of the Health District's 2004 site inspection. These were addressed at the time of the Health District's 2007 site inspection.

Visual Inspection: The new road alignment will extend through agricultural fields, across the now vacant site of a former farmstead, and the current site of a single-family home. The project will include improvements to existing roadways adjacent to cultivated fields and single-family homes. No visual concerns were identified associated with these properties.

The project may include a minor realignment of the existing east OANG access onto Blee Road. The work will be undertaken in an undeveloped portion (lawn) of the base. No visual concerns were identified. The OANG facility was not physically accessed.

The project will parallel the north line of the closed Springfield landfill; the project will not include work within the limits of the landfill. The landfill property was not physically accessed by District personnel at the time of the field visit.

Recommendations: The new road alignment will extend through agricultural fields, across the now vacant site of a former farmstead (barns recently demolished by the City of Springfield), and the current site of a single-family home (owned by the City of Springfield). Permanent and temporary right-of-way adequate for the new alignment will be required from these properties. The project will include improvements to existing roadways adjacent to cultivated fields and

single-family homes. Minor permanent or temporary right-of-way may be required from these parcels. No concerns were identified associated with these properties.

The project will not require temporary or permanent acquisition from the closed Springfield Landfill. The project will not required permanent acquisition form the parcel occupied by the Ohio Air National Guard (OANG) facility (land owned by the City of Springfield). The project may require temporary right-of-way from the OANG facility to allow for improvements to the east OANG entrance off Blee Road.

The project will not include installation of storm sewers, so no deep excavation is anticipated adjacent to either the closed Springfield Landfill or the OANG facility.

In the absence of permanent acquisition from the OANG facility or the Springfield Landfill and in the absence of deep excavation, the District recommends no additional ESA investigations or plan notes in connection with the project.

ENVIRONMENTAL SITE ASSESSMENT SCREENING CHECKLIST

NAME: Tricia Bishop **DATE:** 04-23-2009

TITLE: Environmental Specialist **DISTRICT:** 7

COUNTY/ROUTE/SECTION: CLA-794-00.60 **PID:** 78677

PROJECT DESCRIPTION:
Clark County and ODOT propose to relocate SR 794 in the proximity of the Ohio Air National Guard Springfield base to meet current Department of Defense clearance (force protection) requirements and to allow for anticipated future base growth. The new alignment will be northwest of the existing roadway (up to 1200') and will be a two

Parcel No./Owner/Address: Residential & Agricultural Properties

Project Right-of-Way (Row) Requirements From Parcel:

No New ROW ____ Strip ROW ____ Minor Take X Whole Parcel Take ____ Not Available ____

LAND USE:

Current Land Use (For Commercial/Industrial land use, specify type and tenant):

Residential/Agricultural

Past Land Use (For Commercial/Industrial land use, specify type and tenant):

Residential/Agricultural

Environmental Records	(Date queried)	(Result)
National Priority List (NPL)	EDR Area Study 06-10-2005	None
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	D7 websearches 04-10-2009	None
OEPA Master Site List (MSL)		None
Resource Conservation and Recovery Act (RCRA)		None
Bureau of Underground Storage Tank Regulation (BUSTR)		None
Other State/Local Lists		None

NPL/CERCLIS/OEPA MSL in vicinity (type of facility and location in relation to project):

In 1995, the OANG facility was evaluated for the USDOE under the Installation Restoration Program. Contamination was identified, but the Site Investigation Report for the facility did not identify any concerns within the project's potential construction limits. OANG is an OEPA DERR facility; records reference the USDOE investigation.

Visual Inspection

USTs	None	Surface Staining	None
ASTs	None	Sheens	None
Drums	None	Damaged Vegetation	None
Landfills	None	Odors	None
Pond/Lagoon	None	Other (specify)	None

Phase I ESA required **Yes** ____ **No** **X**

ENVIRONMENTAL SITE ASSESSMENT SCREENING CHECKLIST

NAME: Tricia Bishop **DATE:** 04-23-2009

TITLE: Environmental Specialist **DISTRICT:** 7

COUNTY/ROUTE/SECTION: CLA-794-00.60 **PID:** 78677

PROJECT DESCRIPTION:
Clark County and ODOT propose to relocate SR 794 in the proximity of the Ohio Air National Guard Springfield base to meet current Department of Defense clearance (force protection) requirements and to allow for anticipated future base growth. The new alignment will be northwest of the existing roadway (up to 1200') and will be a two

Parcel No./Owner/Address: Ohio Air National Guard/Springfield-Beckley Municipal Airport

Project Right-of-Way (Row) Requirements From Parcel:

No New ROW ____ Strip ROW ____ Minor Take X Whole Parcel Take ____ Not Available ____

LAND USE:

Current Land Use (For Commercial/Industrial land use, specify type and tenant):

Airport/Air Base

Past Land Use (For Commercial/Industrial land use, specify type and tenant):

Airport opened c.1946. OANG established a presence at the Airport in the 1950s. Previously agricultural.

Environmental Records	(Date queried)	(Result)
National Priority List (NPL)	EDR Area Study 06-10-2005	None
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)		None
OEPA Master Site List (MSL)	D7 websearches 04-10-2009	OANG is a DERR facility.
Resource Conservation and Recovery Act (RCRA)		Airport & OANG are SQG, no enforcement actions or violations.
Bureau of Underground Storage Tank Regulation (BUSTR)		Multiple RUSTs. Four reported LUSTs, all NFA.
Other State/Local Lists		SPILLS – associated with detonation at the base.

NPL/CERCLIS/OEPA MSL in vicinity (type of facility and location in relation to project):

In 1995, the OANG facility was evaluated for the USDOE under the Installation Restoration Program. Contamination was identified, but the Site Investigation Report for the facility did not identify any concerns within the project's potential construction limits. OANG is an OEPA DERR facility; records reference the USDOE investigation.

Visual Inspection

USTs	None w/in construction limits	Surface Staining	None w/in construction limits
ASTs	None w/in construction limits	Sheens	None w/in construction limits
Drums	None w/in construction limits	Damaged Vegetation	None w/in construction limits
Landfills	None w/in construction limits	Odors	None w/in construction limits
Pond/Lagoon	None w/in construction limits	Other (specify)	None w/in construction limits

Phase I ESA required Yes ____ **No** **X**

No permanent ROW will be required from areas of concern identified by the OANG Site Investigation Report. No deep excavation is anticipated adjacent to the OANG facility.

ENVIRONMENTAL SITE ASSESSMENT SCREENING CHECKLIST

NAME: Tricia Bishop **DATE:** 04-23-2009

TITLE: Environmental Specialist **DISTRICT:** 7

COUNTY/ROUTE/SECTION: CLA-794-00.60 **PID:** 78677

PROJECT DESCRIPTION:
Clark County and ODOT propose to relocate SR 794 in the proximity of the Ohio Air National Guard Springfield base to meet current Department of Defense clearance (force protection) requirements and to allow for anticipated future base growth. The new alignment will be northwest of the existing roadway (up to 1200') and will be a two

Parcel No./Owner/Address:

Project Right-of-Way (Row) Requirements From Parcel:

No New ROW ____ Strip ROW ____ Minor Take X Whole Parcel Take ____ Not Available ____

LAND USE:

Current Land Use (For Commercial/Industrial land use, specify type and tenant):

Closed Landfill. Limited use for disposal of animal carcasses.

Past Land Use (For Commercial/Industrial land use, specify type and tenant):

Lanfill c.1968 to mid-1980s. Late 1980s to present

Environmental Records	(Date queried)	(Result)
National Priority List (NPL)	EDR Area Study 06-10-2005	None
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	D7 websearches 04-10-2009	None
OEPA Master Site List (MSL)		None
Resource Conservation and Recovery Act (RCRA)		None
Bureau of Underground Storage Tank Regulation (BUSTR)		None
Other State/Local Lists		Closed landfill

NPL/CERCLIS/OEPA MSL in vicinity (type of facility and location in relation to project):

From 2002 to 2005, the Clark County Combined Health District inspected the site as part of regular monitoring and also due to complaints relating to leachate, inadequate site control, and related concerns raised by the Ohio Air National Guard. A report was issued by the Combined Health District in October 2005 and recommendations were submitted to the City of Springfield. Based on the July 2007 inspection, it appears all recommendations were undertaken at the site.

Visual Inspection

USTs	None w/in construction limits	Surface Staining	None w/in construction limits
ASTs	None w/in construction limits	Sheens	None w/in construction limits
Drums	None w/in construction limits	Damaged Vegetation	None w/in construction limits
Landfills	None w/in construction limits	Odors	None w/in construction limits
Pond/Lagoon	None w/in construction limits	Other (specify)	None w/in construction limits

Phase I ESA required **Yes** ____ **No** **X**

No temporary or permanent ROW will be required from the landfill property and no deep excavation is anticipated adjacent to the former landfill.

OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: John Horman, District 7 Environmental Coordinator **DATE:** 2/2/10

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: ***404/ 401 Permit Determination***

PROJECT: CRS: CLA-794-0.60 PID: 78677 SJN: 479349

We have reviewed the permit determination package for the above referenced project to determine whether or not a United States Corps of Engineers (USACE) Permit will be necessary for the work completed.

The following is the appropriate permit action to be taken by the District Office and/or this office:

- [ ] No Nationwide or Individual Corps of Engineers Permit required.
- [x] An Ohio EPA Individual Water Quality Certification will be needed.
- [x] Project activity is covered by Part 330-Nationwide Permit Program Appendix A
  NWP # Probable 14
  All conditions stated in the Nationwide Permit Program will be followed. The applicable Nationwide Permit(s) shown above and all their conditions (NWP, specific, general, regional and state) shall be included in the plans as special provisions.
- [ ] District Office shall secure necessary information to apply for permit and transmit to this office.
- [x] A Pre-Construction Notification (PCN) is needed to process the permit determination. District please provide.
- [ ] Application for permit has been made by letter dated
- [ ] Permit No. has been issued by the following:
  [ ] Coast Guard [ ] Corps of Engineers [ ] Ohio EPA
- [ ] Plans do not have enough information to make determination. District please provide.

Comments: OES-WPU has reviewed the subject project. Based on the information provided, we determined that the project meets the criteria for a probable **NWP #14 Linear Transportation Projects**. A PCN will be required due to impacts over 500' and the use of temporary construction fill in the unnamed tributaries 2 and 3 of Mud Run and unnamed tributary 5 of Mill Creek. An Individual 401 Water Quality Certifications from the OEPA will be required as impacts to the streams exceed 500' as well. This determination is based upon proposed stream impacts, which are not permitted under the NWP Program. Please note the Individual WQC will take approximately 6 to 8 months to acquire and will require a compensatory stream mitigation proposal. The locals and/or agent are responsible for the permitting and mitigation.

Please contact Bill Cody @ (614) 466-5198, Mike Pettegrew @ (614) 466-7102 or Emily Hunter @ (614) 752-8278 with any questions.

MAP

TMH:WRC:MAP:egh
C: File – Permits File – Reading File
Date Rec: 2/2/10
NMS ✖

OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
District 7

TO: Timothy M. Hill, Administrator, Office of Environmental Services **DATE:** 02-01-2010

Attention: Michael Pettegrew, Environmental Supervisor, Waterway Permits Unit

FROM: **Tricia Bishop, ODOT District 7**

SUBJECT: Project Submission for Waterway Permit Determination (SJN): **479349**

PROJECT: (CRS): CLA-794-00.60 (PID): **78677**

Please address each item below and provide supporting information to aid in determining the appropriate level of waterway permits required for the subject project. **Attach additional information as necessary.**

1. Let type: ☑ Local Let LPA ☐ ODOT Let ☐ ODOT Let LPA
   Plan File Date: **04-23-2012**
   Sale Date: **06-04-2012**
   Award Date: **06-04-2012**

2. Project Description:

> Realign SR 794 to in the proximity of the OANG (Ohio Air National Guard) Springfield base to meet current DOD clearance requirements and to allow for anticipated future base growth.
>
> Project will replace the existing culvert carrying UT2 to Mud Run; the project will also realign approximately 500' of UT2 south of the culvert to follow the new road alignment. Minor work will be required at UT3 (and the associated Wetland C), which enters UT2 near the culvert inlet. A new culvert will be installed at UT5 to Mill Creek, to carry UT5 under the proposed roadway.

3. ☑ Plan sheets: (site plan, plan/profile, waterway crossing structure details, culvert details, cross sections, applicable plan notes)

4. ☐ OHWM is shown on the plan sheets.

5. ☐ No temporary construction fill below OHWM is required.
   ☑ Temporary construction fill below OHWM is required:
   Temporary fill will be placed in: ☐ Perennial Streams ☐ Wetlands ☑ Other

6. ☐ No wetland impact.
   ☑ Wetlands will be impacted:
   Jurisdictional Acreage: **0.003 (Wetland C)**
   ORAM Category(ies): **Level 1**
   Isolated Acreage: **N/A**
   ORAM Category(ies): **N/A**

7. ☐ No stream impact.
   ☑ Streams will be impacted:
   Stream Name(s): **UT2 of Mud Run, UT3 of Mud Run, UT5 of Mill Creek**
   Acreage Impacted: **<0.02A, <0.006A, <0.01A (Total: <0.036A)**
   Linear Feet Impacted: **420'-530', 60'-130', 120'-145' (Total: 600'-805')**
   OEPA Designation: **Mod Class III, Mod Class III, Mod Class II**

State Scenic River?	☑ NO ☐ YES	Section 10 waterway?	☑ NO ☐ YES
National Scenic River?	☑ NO ☐ YES	Section 10 Navigation Pool or Harbor?	☑ NO ☐ YES
Section 9 waterway?	☑ NO ☐ YES	Stream relocation or channelization?	☐ NO ☑ YES

8. Was a USACE Jurisdictional Determination completed for this project? ☑ NO ☐ YES
   If YES, will jurisdictional ditches be impacted? ☐ NO ☐ YES
   Acreage of Jurisdictional Ditches: _____

9.	MOA ecological coordination complete?	☐ NO ☐ YES	☑ NA
10.	Four Agency coordination (ESR) complete?	☐ NO ☑ YES	☐ NA
11.	Will Threatened or Endangered Species be impacted?	☐ NO ☑ YES	
12.	Will sites listed/eligible for National Register of Historic Places be impacted?	☑ NO ☐ YES	
13.	Are mussel bed(s) present?	☑ NO ☐ YES	

If any additional information is required, please contact Tricia Bishop at 937-497-6721.

Enclosures PE Plans Relevant Portions of the Level 2 Eco

PLAN AND PROFILE
S.R. 794 - STA. 106+50.00 TO STA. 119+00.00
CLA-794-0.60
9
90
CALCULATED AVP
CHECKED CSR
HORIZONTAL SCALE IN FEET
0 25 50
MATCH LINE STA. 119+00 SEE SHEET XX
EX. R/W TO BE VACATED
15" DRIVE PIPE
STA. 118+50.00 ℄ S.R. 794 = STA. 300+00.00, ℄ AIRPORT DR
CONST. LIMITS
CROWN LINE
℄ CONSTRUCTION S.R. 794
S.R. 794
CURVE DATA
P.I.= STA. 119+29.72
D = 81° 44' 28" (LT)
Dc = 6° 00' 00"
R = 954.93'
Ls = 205.00'
fs = 6° 09' 00"
LT = 136.15'
ST = 68.41'
x = 204.76'
y = 7.33'
k = 102.46'
p = 1.83'
Dc = 69° 26' 28" (LT)
Lc = 1,157.35'
Ts = 930.37'
Es = 310.31'
C = 1,087.81'
C1-C2 = 204.90'
C.B.1 = S 87° 05' 16" E
C.B. = N 54° 05' 29" E
C.B.2 = S 15° 16' 15" W
STA. 120+04.35 27' PAVEMENT TAPER ENDS
STA. 109+99.35 24' PAVEMENT TAPER BEGINS
72" CULVERT
MUD RUN
POLE BARN
OVERHEAD
SHED
LEGEND
- PAVEMENT TO BE REMOVED
EXISTING GROUND
PROPOSED PROFILE
P.V.C. STA. 111+00.00
ELEV. = 1024.39
P.V.I. STA. 113+00.00
ELEV. = 1022.95
K = 204
400.00' VC
P.V.T. STA. 115+00.00
ELEV. = 1026.83
P.V.C. STA. 106+50.00
ELEV. = 1026.57
P.V.I. STA. 107+50.00
ELEV. = 1026.81
K = 167
200.00' VC
-0.52 %
+1.44 %
-1.76 %
EXIST. GROUND
PROP. PROFILE GRADE
1050
1040
1030
1020
1010
1000
990
1,037.59
1,031.47
1,030.91
1,030.43
1,029.71
1,028.99
1,028.27
1,027.55
1,026.83
1,026.49
1,026.17
1,025.89
1,025.64
1,025.41
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1,026.06
1,026.22
1,026.36
1,026.51
1,026.65
1,026.95
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1,028.47
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115+00
114+00
113+00
112+00
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110+00
109+00
108+00
107+00
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Attachment O-4

Realignment of State Route 794
CLA-794- 0.60
Springfield, Clark County, Ohio
Memorandum of Agreement/Level One Ecological Report

PID No. 78677

November 9, 2009
Revised December 7, 2009

Looking south from SR 794 along Mill Creek. Photo taken June 30, 2009.

Prepared for:
Clark County Engineers Office
4075 Laybourne Road
Springfield, Ohio 45505

Prepared By:
American Structurepoint, Inc.
2550 Corporate Exchange Drive, Suite 300
Columbus, Ohio 43231
(614) 901-2235

V. Aquatic Ecology

The realignment of SR 794 due north is in the vicinity of three tributaries. The project area is located in the Mad River Basin. The OEPA conducted biological and water quality testing throughout this basin in 2003 to reevaluate the area and update their classifications as Warm Water Habitat (WWH) with field testing. Previous assessments of the area had been executed without field confirmation. Streams within the project area and discussed in this report include Unnamed Tributaries 1, 2, 3, 5, and Mill Creek. Unnamed Tributary 4 is not mentioned and is a tributary to the stream, Unnamed Tributary 2.

Aquatic sampling of all identified streams was not conducted as it is not required for streams with watersheds of less than one square mile and depth of less than 40 centimeters as outlined in the ODOT Section 200 Ecological Manual published in January, 2005. Aquatic sampling of Mill Creek is not warranted under the same publication because of a verified WWH aquatic life use classification and no known aquatic endangered species in the area as listed by the Ohio Department of Natural Resources (ODNR) Natural Heritage Database. Minimal baseline water quality data was collected in the field to supplement existing data. Mad River is not listed as a known location of any endangered mussels. See Appendix B Exhibit 4 for tributary locations within the investigated area. Additional habitat data is as follows.

Streams

Unnamed Tributary 1 to Unnamed Tributary 2

Unnamed Tributary 1 flows northeasterly into Unnamed Tributary 2 at the culvert beneath SR 794. The tributary's main substrate was silt and leafy vegetation from cattails present in the area. An HHEI was performed and the tributary was classified as a Modified Class II Primary Headwater Habitat (PHWH) with a score of 62. The likely source of water for the tributary is stormwater discharge from the nearby Springfield Beckley Municipal Airport (OEPA 2005). Appendix B Exhibit 5 shows the location of this tributary in relation with its watershed. The HHEI data sheet can be found in Appendix C for UNT 1 to UNT 2. Photographs 27-30, 35-37, 41, 42, and 44 seen in Appendix A highlight UNT 1.

Unnamed Tributary 2 to Mud Run

Unnamed Tributary 2 flows westerly along SR 794 then turns due north before turning northwesterly and eventually flowing into Mud Run. The main substrate for the tributary is gravel and sand with some cobbles present. An HHEI performed for the tributary yielded the result of Modified Class III with a score of 76. The stream has an aquatic habitat classification of WWH (OEPA 2005). The likely source of flow is runoff and discharge from the nearby airport and air base. Several field tiles empty into the tributary as well. The stream supported a good community of macroinvertebrates. However, the stream was found to be in non-attainment with its WWH classification as a study of biotic species lacked a large community of fish suggesting intermittent water levels and flow. OEPA is currently maintaining the WWH classification until a PHWH study can be completed (OEPA 2005). The HHEI data sheet can be found in Appendix C for UNT 2. Photographs 45- 50, 56, 57, 60, 66, 67, 71, and 72 seen in Appendix A highlight UNT 2.

In addition, baseline water quality analysis was conducted on September 16, 2009. Sampling was conducted immediately upstream of the culvert carrying SR 794 over UNT 2 and downstream of the confluence with Unnamed Tributaries 1 and 3. The following table summaries the data collected.

Unnamed Tributary 3 to Unnamed Tributary 2

UNT 3 flows northerly and converges with UNT 2 at the culvert beneath SR 794. The main substrate is sand and gravel. A HHEI performed for the tributary classified it as a Modified Class III PHWH with a score of 71. Stormwater and discharge from the nearby air fields are the likely source of flow for the stream (OEPA 2005). The HHEI data sheet can be found in Appendix C for UNT 3 to UNT2. Photographs 73, 74, and 79-86 seen in Appendix A highlight UNT 3.

Unnamed Tributary 4 to Unnamed Tributary 2

UNT 4 flows westerly in a poorly defined channel through several residential yards and agricultural fields before emptying into UNT 2. No flow was present during investigation but a soil sample revealed slight saturation. Main channel substrate was silt and gravel where a defined channel existed. An HHEI was performed, and the tributary was classified as a Modified Class II PHWH tributary with a score of 46. Flow is primarily from ditches along Peacock Road and natural drainage from fields and residential yards. The HHEI data sheet can be found in Appendix C for UNT 4. Photographs 151, 152, 156-159, 174, and 176-178 seen in Appendix A highlight UNT 4.

Unnamed Tributary 5 to Mill Creek

UNT 5 flows northerly before turning northeasterly and emptying into Mill Creek. The substrate was dominated by silt and sand. The tributary cuts through a well-established timber stand and receives flow from agricultural runoff, as well as discharge from the nearby air fields (OEPA 2005). An HHEI was performed and the tributary was classified as a Modified Class II PHWH with a score of 65. The stream likely supports a fair community of macroinvertebrates but lacks the permanent habitat features to support continued growth due to its high silt load and intermittent flow. The HHEI data sheet can be found in Appendix C for UNT5. Photographs 183-184 seen in Appendix A highlight UNT 5.

In addition, baseline water quality analysis was conducted on September 16, 2009. Sampling was conducted immediately downstream of the culvert carrying SR 794 over UNT 5. The following table summaries the data collected. It should be noted dissolved oxygen levels within the tributary were noted below the level capable of supporting aquatic life. Flow within this stream was intermittent, and no fisheries or aquatic macroinvertebrates were noted within the stream.

Mill Creek

Mill Creek is the largest body of water in the project area. The stream flows northwesterly before turning north and emptying into the Mad River. The main substrate for the channel is gravel and silt with some cobbles and boulders present. The channel within the investigational area is modified, but recovering. A QHEI performed for the section within the project corridor found the stream was in fair condition with a score of 58. OEPA classifies this stream as an aquatic WWH. Mill Creek is an urban stream that receives discharge from both air fields and the Springfield Beckley Airport wastewater treatment plant (OEPA 2005). The QHEI data sheet can be found in Appendix C for Mill Creek. Photographs 232-238, 246-250, and 252-253 seen in Appendix A highlight Mill Creek.

In addition, baseline water quality analysis was conducted on September 16, 2009. Sampling was conducted immediately upstream of the culvert carrying SR 794 over Mill Creek. The following table summaries the data collected.

Table 1: Summary of Stream Resources within CLA-794-0.60 (PID 78677) Study Area

Stream Name	Drainage Class	11-Digit HUC	HHEI/QHEI	Score	Drainage Area (square miles)	Provisional Classification	Water Body Category*	Linear Feet of Stream Segment in Study Area	**Temp °C	**DO mg/L	**Conductivity µs	**pH	Photos
Unnamed Tributary 1	Ephemeral	05080001190	HHEI	62	0.05	Modified Class II	Non-RPW	180	18	6.38	108	7.6	27-30, 35-37, 41, 42, 44
Unnamed Tributary 2	Ephemeral	05080001190	HHEI	76	0.69	Modified Class III	Non-RPW	1450	18	6.38	108	7.6	45-50, 56, 57, 60, 66, 67, 71, 72
Unnamed Tributary 3	Ephemeral	05080001190	HHEI	71	0.06	Modified Class III	Non-RPW	415	18	6.38	108	7.6	73, 74, 79-86
Unnamed Tributary 4	Ephemeral	05080001190	HHEI	46	0.06	Modified Class II	Non-RPW	200	NA***	NA	NA	7.6	151, 152, 156 159, 174, 176 178
Unnamed Tributary 5	Intermittent	05080001190	HHEI	65	0.17	Modified Class II	Non-RPW	460	18.2	0.6	177.8	7.1	183-184
Mill Creek	Perennial (interstitial)	05080001190	QHEI	58	2.88	Warmwater Habitat	RPW	730	18.3	7.25	126.7	7.8	232-238, 246-250, 252-253

*Determination of whether or not a drainage feature is or is not a Relatively Permanent Water (RPW) is subject to verification by the USACE

**Data for Unnamed Tributaries 1 and 3 were taken in downstream of their locations within Unnamed Tributary 2.

***No water present in channel

Table 2: Hydrologic Connection Analysis of Stream Resources Associated with the CLA-794-0.60 (PID 78677) Study Area

Stream Name	Water Body Category*	Flow Regime	Drainage Sequence to TNW**	Photo #
Unnamed Tributary 1	Non-RPW	Ephemeral	UNT 1 → UNT 2 → Mud Run → Mad River → Great Miami River	27-30, 35-37, 41, 42, 44
Unnamed Tributary 2	Non-RPW	Ephemeral	UNT 2 → Mud Run → Mad River → Great Miami River	45-50, 56, 57, 60, 66, 67, 71, 72
Unnamed Tributary 3	Non-RPW	Ephemeral	UNT 3→ UNT 2 → Mud Run→ Mad River→ Great Miami River	73, 74, 79-86
Unnamed Tributary 4	Non-RPW	Ephemeral	UNT 4 →UNT 2 → Mud Run → Mad River →Great Miami River	151, 152, 156-159, 174, 176-178
Unnamed Tributary 5	Non-RPW	Intermittent	UNT 5 → Mill Creek → Mad Run → Great Miami River	183-184
Mill Creek	RPW	Perennial (interstitial)	Mill Creek→ Mad Run →Great Miami River	232-238, 246-250, 252-253

*Determination of whether or not a drainage feature is or is not a Relatively Permanent Water (RPW) is subject to verification by the USACE

**TNW - Traditional Navigable Water

Attachment O-9

Table 5: Hydrologic Connection Analysis of Wetland Resources Associated with the CLA-794-0.60 (PID 78677) Study Area

Wetland ID	Connection	Wetland to Water Body Category Connection	Drainage Sequence to TNW	Photo #
Mill Creek	Adjacent	RPW	Mill Creek Wetland → Mill Creek→ Mad River → Great Miami River	222-227
A	Isolated	Non-RPW	Isolated	104-106
B	Abutting	Non-RPW	Wetland B → UNT 4 → UNT 2→ Mud Run → Mad River → Great Miami River	167-171
C	Adjacent	Non-RPW	Wetland C → UNT 2 → Mud Run → Mad River→ Great Miami River	27-44

Attachment O-10

IX. Impacts

The realignment of SR 794 north to comply with the DOD clearance standards will impact one wetland and three streams. Preliminary impacts have been determined. Currently, impacts to Mill Creek, UNT 1, and UNT 4 identified within the study limits will be minimal and limited to runoff from the new roadway. Existing culverts at Mill Creek and UNT 5 to Mill Creek will not be replaced during construction, and the roadway will not cross UNT 1 or UNT 4. The existing culvert carrying SR 794 over UNT 2 will be replaced and a new crossing of UNT 5 will be installed. Additionally, UNT 2 will be relocated along SR 794 to accommodate the wider roadway.

The existing culvert carrying SR 794 over UNT 2 will be replaced. This structure is located on UNT 2 to Mud Run just north of the confluence with UNT 1 with UNT 3. A new culvert, similar in size to the existing 72-inch-wide by 42-inch-tall concrete pipe, will be placed to replace the existing culvert. This new culvert will be installed at the same location as the existing culvert and follow approximately the same alignment. This culvert new will be approximately 60 feet in length. Approximately 130 linear feet of this channel is located within the proposed construction limits.

UNT 2 currently serves as the roadside ditch along the south side of SR 794. As part of the proposed widening and relocation of SR 794, it is anticipated approximately 420 linear feet of this channel will be relocated due to widening of the roadway. Approximately 520 linear feet of this channel is located within the proposed construction limits.

A new culvert approximately 60 inches in diameter and approximately 120 feet long will be placed to carry UNT 5 under the relocated SR 794. UNT 5 will be captured by the culvert. New roadside ditches will be placed at all four corners coming into the culvert. UNT 5 is a silt and sand bed intermittent stream with limited aquatic habitat. Disturbance to aquatic species is anticipated to be minimal as the stream does not have sufficient habitat to support aquatic macroinvertebrates and has intermittent flow and cannot sustain permanent populations. Approximately 145 linear feet of this channel is located within the proposed construction limits.

Table 6: Potential Stream Impacts within the CLA-794-0.60 (PID 78677) Construction Limits

Stream Name	Drainage Area (square miles)	Stream Classification	Stream Length (lft)	Stream Impact (lft)	Stream Impact (acre)	Stream (%loss)
Unnamed Tributary 1	0.05	Modified Class II	180	0	0	0
Unnamed Tributary 2	0.69	Modified Class III	1450	420-530	<0.02	29-37
Unnamed Tributary 3	0.06	Modified Class III	415	60-130	<0.006	14-32
Unnamed Tributary 4	0.06	Modified Class II	200	0	0	0
Unnamed Tributary 5	0.17	Modified Class II	460	120-145	<0.01	26-32
Mill Creek	2.88	Warmwater Habitat	730	0	0	0

Impacts to wetlands identified within the study corridor will be minimal. Wetland Areas A, B, and the Mill Creek Wetland are outside of the proposed right-of-way and should not be impacted. Wetland Area C is within the proposed right-of-way upstream of the culvert replacement. Impacts to this wetland would be associated with the replacement of the existing culvert. It is anticipated 0.003 acre of wetland will be impacted.

Table 7: Potential Wetland Impacts within the CLA-794-0.60 (PID 78677) Construction Limits

Wetland ID	Wetland Habitat Types	ORAM Score	ORAM Category	Wetland Area (acre)	Wetland Impact (acre)	Wetland (% loss)
Mill Creek	PSS and PFO	32	1 or 2 gray zone	4.74	0	0
A	PEM	13	1	0.22	0	0
B	PEM	20	1	0.04	0	0

The ODNR Natural Heritage Database located the Upland Piper (*Bartramia longicauda*), a federally threatened species, in an area defined as the 178th Fighter Wing of the Ohio Air National Guard Springfield Base and the Beckley Municipal Airport. However, the bird was not sighted during field investigation. Impacts to the bird's habitat will be minimal since the roadway will be moved away from the bird's core grassland habitat as indicated in Exhibit 11 Appendix B. The reconstruction of existing SR 794 near the bird's core habitat will be on the same alignment as the existing and will not negatively impact the area.

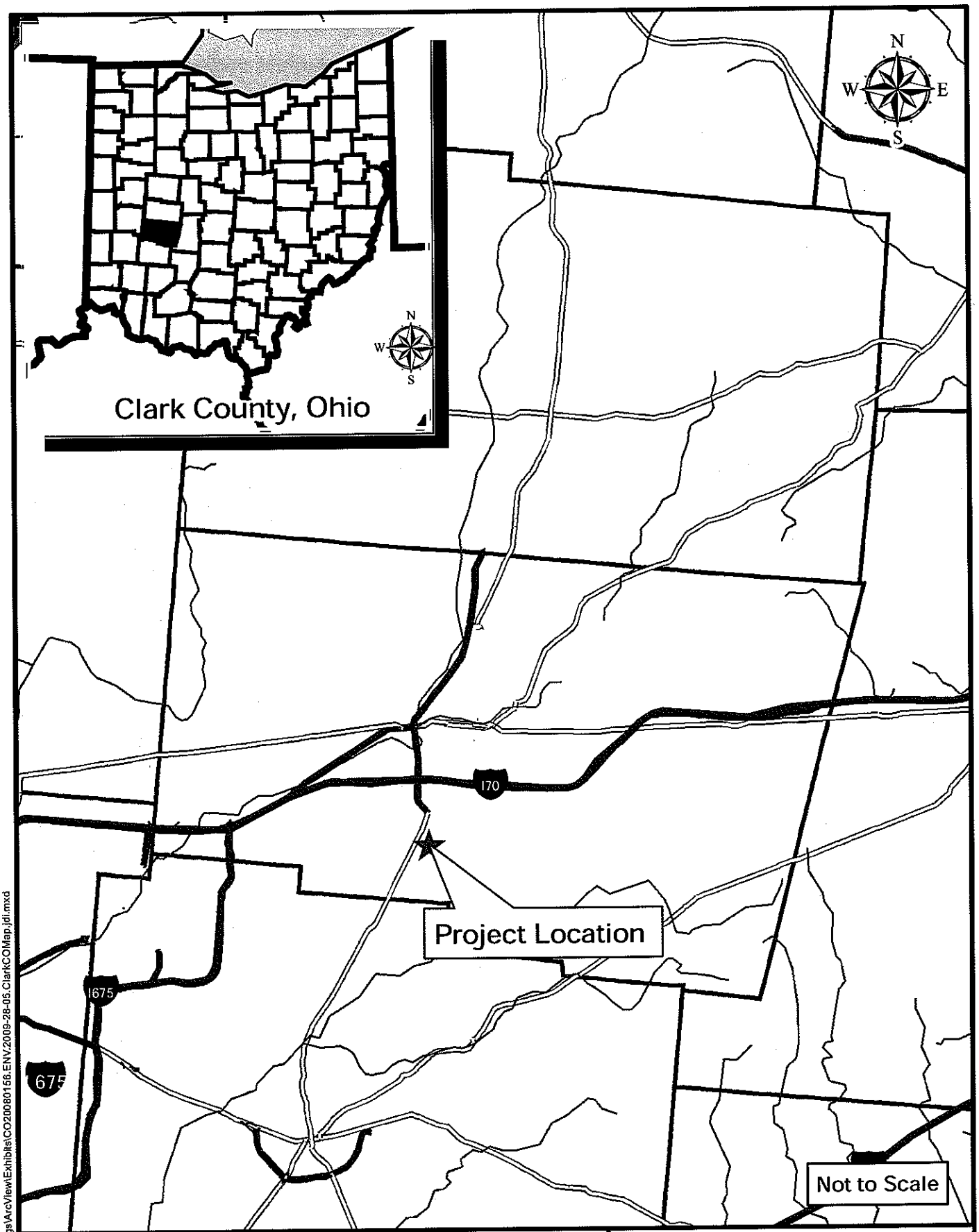
Within the approximate area of the anticipated right-of-way, 17 potential Indiana bat roost trees were noted, and will be removed from within the construction limits. A seasonal ban on tree removal is anticipated to minimize impacts to unknown bat populations.

A preliminary determination of acreage of land-use types within the study corridor was prepared. The dominant land use is agricultural including row crops and pasture. Anticipated ROW will call for the purchase of at least 24.61 acres. The majority of this will come from agricultural lands. See the table below, as well as Exhibit 18 Appendix B.

Table 8: Land Use Impacts of the CLA-794-0.60 (PID 78677) Study Area

Habitat Type	Acres within Study Area	Impacted Acres	% Loss
Row Crop	79.8	17.52	22
Pasture	5.97	1.1	18
Grassland/Herbaceous	4.61	1.49	32
Deciduos Forest	10	4.81	48
Woody Wetland	0.44	0	0
Emergent Wetland	0.22	0	0
Scrub/Shrub	0.4	0.21	53
Low Intensity Development	6.08	0.49	8
Medium Intensity Development	8.44	0.53	6
Transportation*	4.53	3.92	87

*Existing Road that will be used in the proposed project should not be considered an impact



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www.structurepoint.com

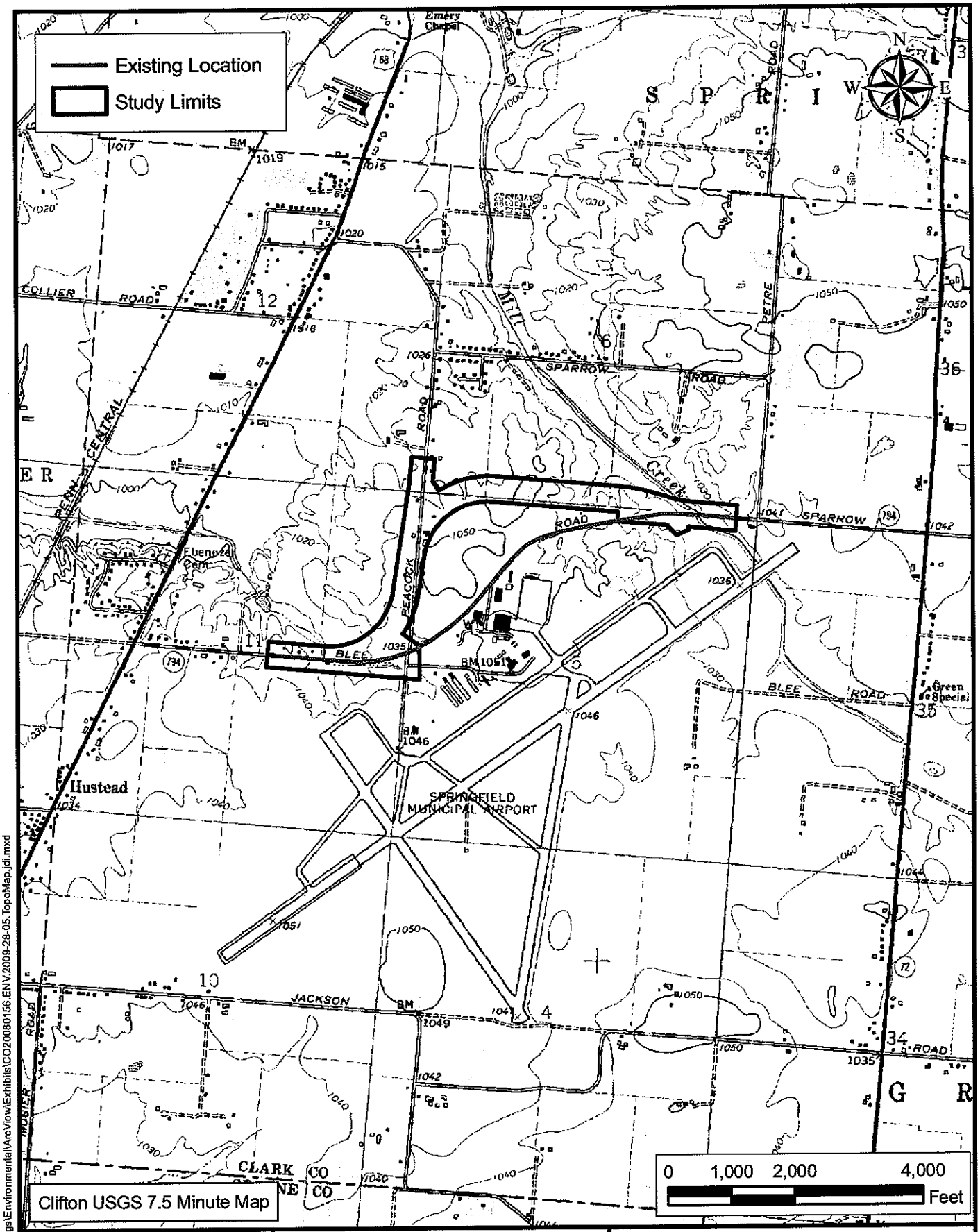
Project Location Map

Applicant:

Clark County Engineer
4075 Laybourne Road
Springfield, Ohio 45505

CLA-794-0.60
PID 78677
Location: Springfield
Township: Springfield
County: Clark
State: Ohio

Date: 05/28/2009



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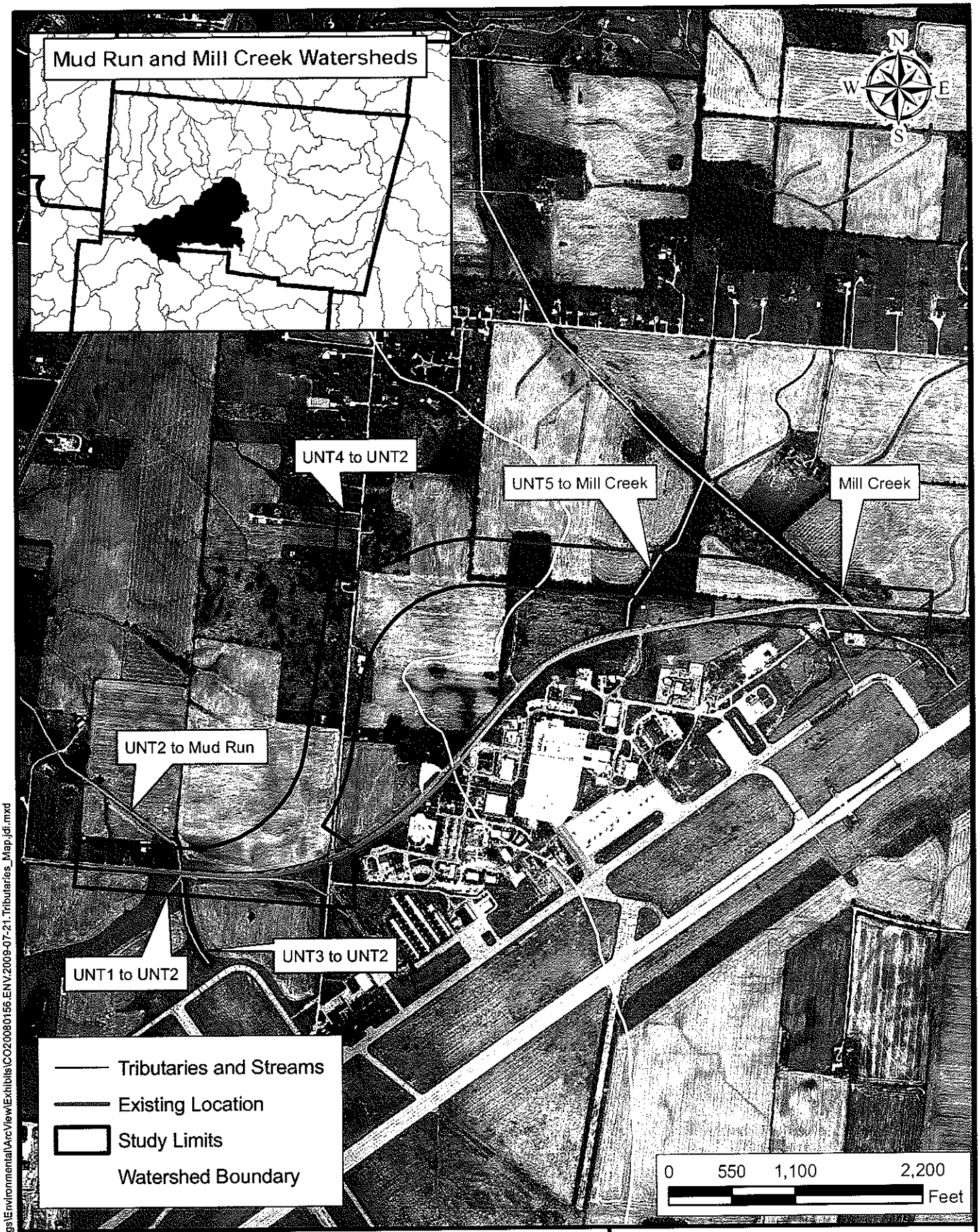
AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

Project Topography Map

Applicant:
Clark County Engineer
4075 Laybourne Road
Springfield, Ohio 45505

CLA-794-0.60
PID 78677
Location: Springfield
Township: Springfield
County: Clark
State: Ohio
Date: 05/28/2009



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AMERICAN STRUCTUREPOINT INC

www.structurepoint.com

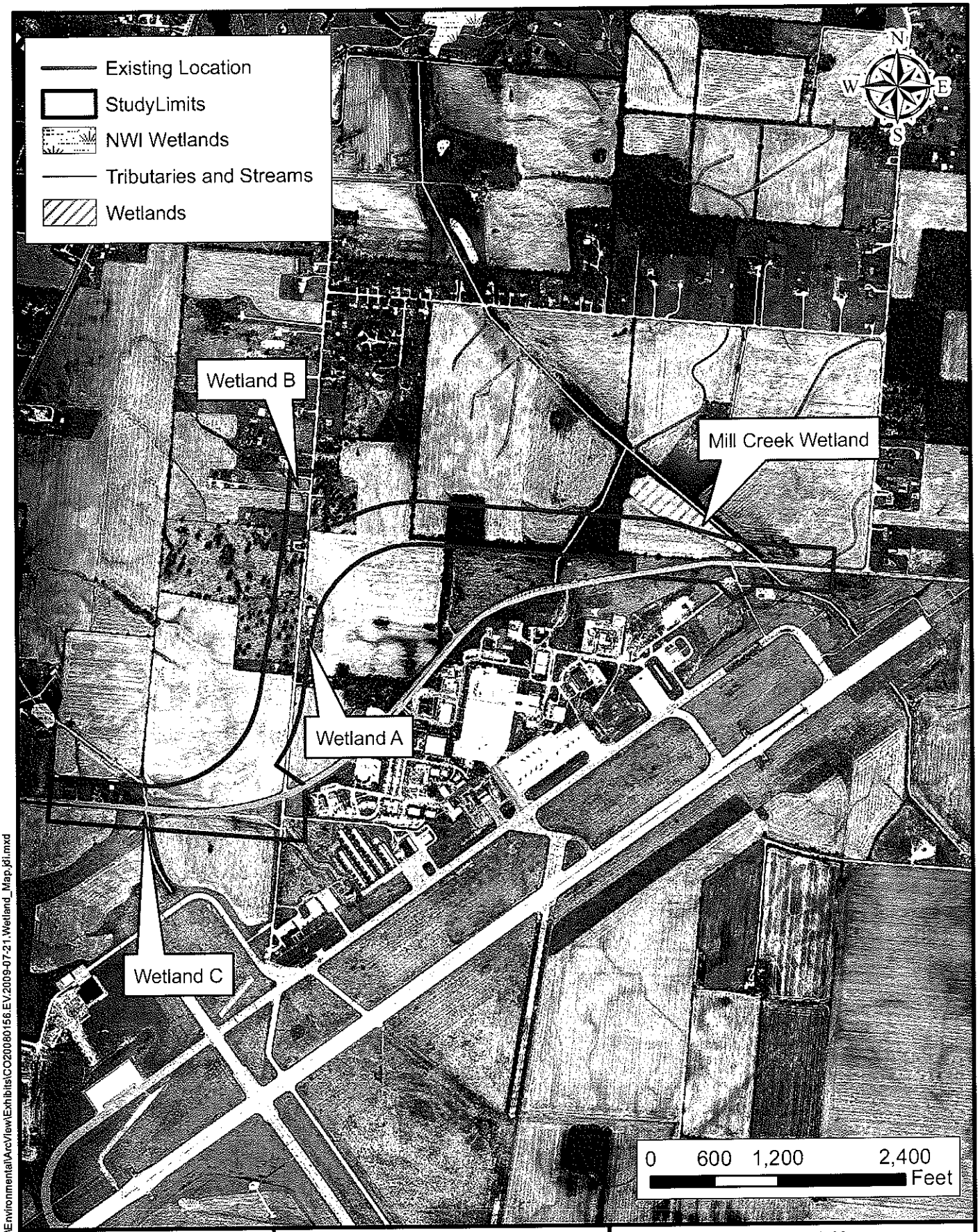
Project Tributaries Mapping

Applicant:

Clark County Engineer
4075 Laybourne Road
Springfield, Ohio 45505

CLA-794-0.60
PID 78677
Location: Springfield
Township: Springfield
County: Clark
State: Ohio

Date: 07/21/2009



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Wetland Mapping

Applicant: Clark County Engineer
4075 Laybourne Road
Springfield, Ohio 45505

CLA- 794-0.60
PID 78677

Location: Springfield
Township: Springfield
County: Clark
State: Ohio

Date: 07/21/2009